HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH AND SOCIAL SECURITY

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HOSPITAL ABSTRACTS

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HOSPITALS IN GENERAL

767. TUCKETT, D. **An introduction to medical sociology.** London, Tavistock, 1976, x, 412pp. £9.00

This book is in four parts: (i) an introductory chapter dealing with the importance of sociology for medical practice, some sociological concepts, and the scope of sociological contributions to medicine; (ii) three chapters dealing with sociological methods, theories of the family, and social class and stratification; (iii) six chapters dealing with various substantive areas of medical sociology, including doctor-patient relationships, the organization of hospitals and the organization of the National Health Service; and (iv) conclusion.

HOSPITALS IN GREAT BRITAIN

See also Abstract No. 816

768. ANDREWS, C. T. **The first Cornish hospital.** Truro, The Author, 1975, [x], 226pp. £3.75

This book presents the history of the Royal Cornwall Infirmary, Truro, from the early moves leading to its eventual establishment in 1799 up to 1938.

HOSPITALS IN OTHER COUNTRIES

See also Abstract Nos. 780, 816

769. BOTTARI, G. La realtà ospedaliera nell'esperienza regionale. **[The hospital in regional experience.]** *Ospedali d'Italia*, Roma, 1975, Dec., no. 12, pp. 18-29.

Hospitals in Italy cannot carry out their role without the aid of local structures capable of supporting them. Because of lack of proper planning on a national level, Law 132 has not led to real reform, and the differences between one region and another have become accentuated. Costs have increased dramatically and the mutual benefit societies have been unable to absorb the additional burden. Law 386, intended as a temporary measure, has established totally inaoequate national and regional hospital funds and the basic system of hospital financing no longer rests on the charge to the patient. Scant attention has been paio to staff training and the establishment of nationally recognized qualifications.

770. LEOPIZZI, F. L'ospedale delle comunità locali nel servizio sanitario nazionale. **[The local community hospital in the national health service.]** *Ospedali d'Italia*, Roma, 1975, Dec., no. 12, pp. 7-17.

The contribution that the Italian Federation of Regional Hospital Associations has made to the reforms, proposed and actual, in the health service in Italy is outlined. Some of the detects of the present system are discussed, in particular the shortage of funds. There will never be enough money for the service unless demands made on the system by both patients and staff are contained within tolerable limits. Total 'regionaliza-

tion' is a matter for the future; in the meantime certain functions for which decisions can be taken at a local level should be identified and so should the relationship between responsibility for management and the power of decision. Finally, the local units which will eventually administer the health service should, from the point of view of the hospital, be based on the area which is served by the latter.

771. GRUBMÜLLER, J. Entwicklung der Gegenwart des Krankenhauses in Niederösterreich. **[Current hospital development in Lower Austria.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, March, vol. 17, no. 3, pp. 149-150, 153-156, 159-161.

Lower Austria has at present 25 general hospitals with 7,882 beds and two psychiatric hospitals with 2,395 beds: total staff (excluding student nurses) is 7,270, of which 10 per cent are doctors, 40 per cent nurses, and four per cent administrative staff. There are 1,526 registered nurses (1,500 women and 26 men) of whom 387 are over 40. Details are given of existing hospitals and of planned projects. More geriatric departments or long-stay hospitals are needed to relieve acute beds. There is also a pressing need for more in-patient provision in the specialties of urology and orthopaedics.

772. ATLUNG, G. Skal det lokale sygehus nedlaegges eller bevares? **[Should the local hospital be closed down or preserved?]** *Tidsskrift for danske Sygehuse*, København, 1976, Feb., vol. 52, pp. 11-13.

The author feels that the human atmosphere is better in small, old hospitals than in large, new ones. The human factor should be quantified and included in the calculations which precede the decision to replace an old hospital with a new one. A calculation model of this sort would ensure the inclusion of all significant means of communication with the hospital environment, separate interdependent from mutually independent factors, and make it possible to put a price label on individual movements of people, supplies and information into and out of the hospital area. Assuming all staff live in the immediate vicinity of the old hospital, moving out to new buildings with poor bus services can be proved to cost £2,000 a head per year in travelling expenses. A hospital being up-graded needs a new transformer station in the grounds, and the expense of this facility may be unacceptable, whilst one being down-graded will have an excess power capacity. The paper is illustrated with a table of the factors requiring quantification and consideration.

PLANNING, DESIGN AND CONSTRUCTION

See Abstract Nos. 811, 837

DETERMINING SIZE OF HOSPITAL AND BED NEEDS

773. BALOG, J. Adatok a fekvöbeteg-gyógyintézetek aktiv/krónikus ágyai arányának a kórházi ápolási idötartamok alapján való tervezéséhez. **[Data for planning the ratio of short- and long-stay beds on the basis of length of stay.]** *Egészségügyi Gazdasági Szemle*, Budapest, 1975, Dec., vol. 13, no. 4, pp. 442-449; summaries in Russian, English and German p. 449.

In order to develop progressive patient care on a sound basis the length of stay has

to be taken into account. The author considers patients to be chronic cases if their length of stay exceeds 29 days. According to a national survey in 1972/73, 9.6 of patients treated in all hospital departments fall into this category representing 43 per cent of patient days. Having considered correctional factors, the author agrees with the Hungarian Ministry of Health's short-/long-stay bed ratio of 55:45. [This abstract has been prepared from an English summary of the paper.]

774. LIU, B.-C. **Regional hospital needs projection: an input-output approach.** *Socio-Economic Planning Sciences*, Oxford, 1976, vol. 10, no. 1, pp. 37-42.

In order to achieve a more equal distribution of medical resources and services in the United States, regional planning teams periodically reassess and reorganize the health system. A simple input-output model that may be used for the forecasting and projection of hospital service needs is outlined. A clinical approach based on the age, sex, area and medical specialty of the patient is used to establish regional characteristics. The bed needs for the hospitals in the Kansas City Metropolitan Area for 1975 to 1995 are forecast using this method, taking as a basis the number of discharged patients and the relationship between the health services and the capacity of the hospitals. By comparing capacity, investment and location, decisions on future needs can be made with the minimum possibility of misallocating resources. The model can also be applied to determine physician and nurse service needs.

BUILDING: TENDERING, ETC.

See also Abstract No. 776

775. MCLAUGHLIN, H. **Accelerating the planning and construction process: tips from a developer.** *Trustee*, Chicago, 1976, Feb., vol. 29, no. 2, pp. 22-24, 26.

In order to improve efficiency and planning in a large hospital new techniques must be developed on the lines of commercial organizations. These include: (i) the use of a professional project manager; (ii) rejection of traditional methods in favour of feasibility studies; and (iii) standardization of some building elements. The qualities required of a project manager are assessed together with his potential salary. Skilled project management is expected to save at least six months on major projects. Its objectives and methods are outlined. A feasibility study of the project must be carried out so that expenditure and cash flow needs can be evaluated. New techniques for decision making used by the project manager are 'squatting', in which a basic design and work schedule are decided in an intense but short time, and 'marathons', in which small groups meet for long sessions of between eight to 12 hours. Evaluation of past performance and standardization of plans should produce significant savings. Hospitals faced with rising inflation can benefit from the techniques used by commercial organizations to develop their projects.

HOSPITAL DESIGN

776. BEVILACQUA, C. Criteriologia in tema di edilizia ospedaliera. **[Criteria in hospital building.]** *Ospedale*, Torino, 1976, Jan., vol. 29, no. 1, pp. 3-13.

Hospital building in Italy must still conform with the requirements of a decree

enacted in 1939 which specifies, for example, the maximum size and height of the buildings and their position in relation to the sun (the wards to face south-east). Many of these requirements are now out-of-date. The author discusses in some detail the advantages of using industrialized and/or prefabricated buildings for new hospitals, in particular their flexibility and speed of construction. He also suggests that a measure of centralization in hospital planning could have many financial, technical, and organizational benefits.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

777. LE CAMUS, J. Le nouveau centre hospitalier de Wissembourg. **[The new hospital centre in Wissembourg.]** *Techniques Hospitalières*, Paris, 1976, Feb., vol. 31, no. 365, pp. 58-60.

The new general hospital at Wissembourg (architects: Arsec and Walker) has 271 beds in three wings radiating from a central core which houses the medical and administrative offices. It has the main entrance, receptional hall and provisional school of nursing on the lower ground floor and administration, chapel, nurses' home, rehabilitation, clinics, etc. on the upper ground floor. The first floor, the technical 'plateau', houses technical and support services. The second floor has 91 surgical beds in 36-, 32- and 23-bed units and the third floor 98 medical beds in 36-, 32- and 30-bed units. The 37-bed children's department is on the fourth floor.

778. Das kantonale Bezirksspital Sursee. **[Sursee Cantonal District Hospital.]** *Veska*, Aarau, 1976, March, vol. 40, no. 3, pp. 107-117.

The new district hospital at Sursee (Lucerne Canton), completed in 1975, has an eight-storey ward block and a treatment and general services area part two storeys and part three storeys. A normal ward floor has 29 beds (three single, five double and four four-bed rooms), divided into nursing groups of eight to 12 beds. The ward block has a roof terrace which is used by both patients and staff. There are three staff residence buildings: a slab block with apartments for senior staff and doctors; a five-storey V-shaped block for religious sisters; and a seven-storey V-shaped block for nursing and domestic staff. The paper includes a site plan, nine floor plans and five photographs.

779. ZOHNDER, P. and others. Das hochhaus II des kantonsspitals St.Gallen. **[Tower block II, St. Gallen Cantonal Hospital.]** *Veska*, Aarau, 1976, Feb., vol. 40, no. 2, pp. 59-67.

The new 200-bed tower block II at St. Gallen Cantonal Hospital, which is adjacent to the surgical tower block I, was officially opened in November 1975. It has 20 storeys and a subground floor and houses the departments of ophthalmology; ear, nose and throat; neurosurgery; and neurology. In addition it contains the cantonal pharmacy, which serves other hospitals as well as the central hospital, and the Institute of Clinical Chemistry and Haematology. Wards are on the fifth to 12th floors and have single, two-bed and five-bed rooms. Examination and treatment departments are on the 13th to 19th floors and are on a double corridor plan. The top floor houses technical services. The paper is illustrated with three photographs, a site plan, an elevation and 12 floor plans.

780. RAUH, W. D. Differenzierte Grossklinik dargestellt am Beispiel des Klinikzentrums Dortmund-Bolmke. **[A different type of hospital, as exemplified by the Dortmund-Bolmke Hospital Centre.]** *Krankenhaus*, Stuttgart, 1976, Feb., vol. 68, no. 2, pp. 52-59.

The plans for a new 1,234-bed hospital (architects: Wolfgang Rauh, Hattingen, and Horst Retzki, Dortmund) to be built in an open area 3.5 km. from the centre of Dortmund are described and illustrated. In order to fit in with the landscape the building is to be limited to four floors. From the central area, which will house common service and treatment departments, four ward wings will radiate. Each wing will house six nursing units, grouped in pairs, in such a way that the distances nurses will have to walk from their station to the beds will be as short as possible. As the appropriate treatment departments will be on the same floor as the patients, vertical transport will be reduced to a minimum. The paper is illustrated with a photograph of a model and sketch plans of three of the floors.

781. SALLING, A.-L. Nyt sygehus taget i brug i Kolding: et moderne sygehus med en central forsyningstjeneste. **[New hospital comes into use in Kolding: a modern hospital with a central supply service.]** *Sygeplejersken*, København, 1976, Jan. 28, no. 4, pp. 4-6.

The first, 400-bed stage of Kolding's new hospital (architect: C. F. Möller) was opened in September 1975, comprising medical, surgical and orthopaedic departments. Obstetrics and gynaecology, paediatrics, out-patient, psychiatry and alcoholism departments are temporarily in the old buildings in town. The ground floor houses the supply and transport sector, entrance hall and offices, and an escalator leads up to the second and third floors with their 72-bed wards to the east, treatment departments to the west, and central stores. The staff of 500 make extensive use of motorized trolleys, bicycles, and scooters to reduce travelling times in the long corridors. All bedside installations are mounted on a wall panel: bell, light, radio, telephone plug, power, oxygen and vacuum supply. Operating theatres have hydraulically manoeuvrable tables and an 'anaesthesia column' with centrally piped oxygen, vacuum, nitrogen, telecommunications facilities and power supply. The most important innovations are the centralization of cleaning, packaging and sterilization of supply services, and central service of all food by the kitchens. Trays containing instruments for the various medical and surgical procedures are laid out on a 'carousel' and packed on runners in closed trolleys for outward transport. The paper is illustrated with two exterior and 12 interior photographs.

782. **Hyvinkää Regional Hospital.** *Sairaala*, Helsinki, 1976, vol. 39, no. 3, pp. 99-114.

This new hospital has 216 beds (80 medical, 80 surgical, 28 maternity and 28 gynaecology) and a full range of technical and service departments. It consists of the five-storey main building and a single storey service centre, with a tunnel connecting them. Plans and photographs of the building are accompanied by a brief description in Finnish, Swedish, German, English and Russian. The legend to the plans is also in all these languages.

DESIGN OF SPECIAL DEPARTMENTS

783. DEME, L. A Fővárosi István Kórház mosodájának rekonstrukciója. **[Reconstruction of the laundry of István Hospital, Budapest.]** *Egészségügyi Gazdasági Szemle*, Budapest, 1975, Dec., vol. 13, no. 4, pp. 472-481; summaries in Russian, English and German, p. 481.

Details are given of the reconstruction of this laundry, which took three years. The output of the five washer-extractors installed is 440 kg./hour. Water consumption has fallen to about two-thirds of the former quantity. [This abstract has been prepared from an English summary of the paper.]

784. OVERMAN, M. **The endless advantages of the octagonal O.R.** *Dimensions in Health Service*, Toronto, 1976, Feb., vol. 53, no. 2, pp. 39-40, 42.

The modular operating theatre provides an economical answer to all operating theatre problems and has many advantages over the traditional theatre. The Venesta operating theatre system, octagonal in shape, consists of a self-supporting steel framework clad with melamine-faced panels joined by polyvinyl chloride extrusions providing air-tight seals. The walls are of cavity construction, consisting of two panels with an air space between. The ceiling is a single-skin panel, thicker than the walls. The advantages of the octagonal shape are: ease of cleaning, freedom for air circulation, easier planning of the operating theatre and large wall space areas for equipment creating the possibility of using a smaller floor space. The air-conditioning system is designed to 'wash' down the ceiling and walls as well as providing air for the operating table. The air change rate is 20 times an hour. The wall-mounted equipment is provided with rear access, allowing servicing to be carried out without the need for entering the theatre; wall panels can be rapidly exchanged. The design is flexible and the module can be dismantled and re-erected in any type of existing hospital.

DESIGN OF SPECIAL HOSPITALS OR UNITS

785. **A pediatrics center's ambience accents patient care, play, and parents' convenience.** *Hospitals*, Chicago, 1976, Jan. 16, vol. 50, no. 2, pp. 23-25.

The new paediatric clinic at the City of Hope National Medical Center, Duarte, Calif., provides care from infancy to 16 years. The asymmetrical building of reinforced concrete, provides more than 39,000 square feet of space on three levels. To the north and south of the building there are courtyards for play. The in-patient node extends westwards from the central lobby, and includes classroom, examination rooms, kitchen, staff sitting-room, bathrooms and maintenance rooms. Two play terrace units cater for infants to six-year olds, and seven- to 12-year olds, whilst a 'Teen Room' caters for 13- to 16-year olds. The patients' rooms are flexible, designed as two room units, but with sliding doors and curtains to allow the rooms to be combined, semi-private or private. The out-patient wing extends to the north and includes conference, examination and treatment rooms, a laboratory and playroom. The two-storey lobby separates the out-patient and in-patient wings. The second floor of the centre includes offices, laboratories, photographic dark rooms and maintenance rooms. A semi-basement is located below the in-patient wing and is used for storage. Two photographs of the centre and a plan are included.

786. BAUHOFER, P. and others. Das Pflegeheim Weinfelden. **[Weinfelden Nursing Home.]** *Veska*, Aarau, 1976, March, vol. 40, no. 3, pp. 119-122.

The regional nursing home at Weinfelden (the first of its kind in Thurgau Canton) forms part of a development for the elderly. It is intended for long-stay patients; nursing care and rehabilitation, rather than medical treatment, are its objectives. The ground floor houses administration, kitchens, and a multi-purpose hall (which can be divided up into smaller rooms) for meetings, entertainment and religious services. The first and second floors each have a 28-bed ward, subdivided into two nursing groups each with two single, two double and two four-bed rooms. The third floor, at present used as staff quarters, will later also house a 28-bed ward. Decorations and furnishings aim at a homely and non-institutional atmosphere. The paper is illustrated with three floor plans and seven photographs.

787. Verpleeghuis 'Zuyder Waert' te Heerhugowaard. **['Zuyder Waert' nursing home, Heerhugowaard.]** *Technische gids voor Ziekenhuis en Instelling*, Amsterdam, 1976, Feb. 17, vol. 45, no. 1095, pp. 106-109.

The basic shape of this 150-bed nursing home is an axis along which lie five pavilions, crossed in the centre by a shorter axis containing treatment rooms and general offices. Staff accommodation is in a block of flats. Each pavilion, of double-corridor design, has a night section comprising six four-bed, two double and two single rooms, isolation room, four toilet areas, bathroom and store-room, and a day section with two sitting/dining-rooms, each with adjoining kitchen, staff office and a wide corridor leading round attractively laid-out central gardens. Round the hall near the main entrance are offices, two lecture rooms, two consulting rooms, hairdressing salon, room for small parties and a recreation hall. At the back of the building are medical, technical and domestic offices and the physiotherapy department. The catering system uses pre-prepared, deep-frozen single portions, which are stored in a 60,000 litre deep-freeze and heated in special ovens in the pavilions' kitchens and staff restaurant. The central kitchen employs only two assistants to prepare soups and cold meals. A ground plan and five photographs are included.

788. **Younger chronic sick unit, Moseley, Birmingham.** *Hospital Development*, London, 1976, March/April, vol. 4, no. 2, pp. 10-11.

Hillcrest residential unit for the younger chronic sick is sited in the grounds of Moseley Hill Hospital and allows easy access for patients into the local community and to the hospital facilities. Accommodation is at ground level with wide corridors and doorways for wheel chairs, handrails and trolley protection rails. A treatment room is used for sterile procedures and dental clinics. Facilities include private rooms for patients and relatives, occupational therapy areas, and a large community room. All bathrooms are specially equipped to suit the severely handicapped. Underfloor pipe coils and natural convectors form the heating system fed from the main hospital boiler. In all rooms there is extract ventilation.

789. **Psychiatry and architecture.** *World Hospitals*, London, 1976, Jan., vol. 12, no. 1, pp. 52-82.

The six papers presented in a discussion group on the relationship between architecture and psychiatry at the 19th International Hospital Congress, Zagreb, 1975, are

reproduced. The aspects covered are: the right to normal living conditions for the psychiatrically ill and handicapped; the dichotomy of the handicapped and non-handicapped and the implications for the design of the environment; behavioural science and the rationalization of architectural design; the psychological and social effects of design; psychiatric architecture and sociotherapy; and achievements in architecture and psychiatry in the United Kingdom. A summary of the findings of the discussion group is included.

GARDENS AND GROUNDS, PARKING

790. STERNER, J. and LARSEN, J. L. Sygehusets omgivelser?? **[The hospital environment??]** *Tidsskrift for danske Sygehuse*, København, 1976, Feb., vol. 52, pp. 14-20.

Many old hospitals originally constructed in large green areas on the edges of towns are now surrounded by housing estates and have been extended to cover most of their original grounds. On the basis of the situation at an actual 80-year old hospital (Aarhus Borough Hospital) it is proposed that the immediate environment of older hospitals be reorganized. Parked cars occupy too great an area: about a third of all parking spaces should be ploughed up and planted with grass and trees, whilst little-used streets outside the hospital perimeter should be closed off and turned into car parks. The high brick wall round the grounds should be pulled down as a psychological opening-up gesture, and all internal paths and roadways should be planted, straightened, well-lit and made suitable for pedestrians and cyclists. The hospital grounds will then become an attractive and integral part of the town environment, making it a normal, daily experience for the healthy, and removing the sense of isolation from patients, staff and visitors. The paper is illustrated with four exterior photographs and a number of present and suggested ground plans.

ENGINEERING SERVICES

TRANSPORT IN GENERAL

791. ELLRICH, M. Über die Wirtschaftlichkeit von automatischen Waren-transportanlagen im Krankenhaus. **[The economics of automated goods transport in the hospital.]** *Krankenhaus Umschau*, Kulmbach, 1976, March, vol. 45, no. 3, pp. 167-172.

Four types of automated internal transport for hospitals are distinguished: (i) conveyor belts, with lifts for vertical transport; (ii) battery driven trolleys plus lifts; (iii) overhead rail systems with lifts for vertical transport; and (iv) overhead rail systems for both horizontal and vertical transport. Each system is briefly described and considered from the following aspects: structure of building; hospital organization; materials flow; type of food service; hygiene; staff needs; and maintenance and running costs. Since an automated transport system is closely linked with the structure of the

hospital and its organization, it should be taken into account from the very earliest planning stage.

VENTILATION AND AIR-CONDITIONING

See Abstract No. 864

MAINTENANCE OF BUILDINGS AND EQUIPMENT

792. **Preventive maintenance.** *Hospital Development*, London, 1976, March/April, vol. 4, no. 2, p. 12.

Stockport Area Health Authority has increased the efficiency of the plant used at 10 hospitals by using continuously running plant and an effective preventive maintenance programme. Details of the nature and location of all items of plant are contained on metal data plates. The plates have a metal tag which indicates whether an item of plant is to be serviced weekly, quarterly or annually, and in which weeks the service is to take place. An addressing machine is set with the code number for the week and plates that correspond to the code are printed on to dockets. The dockets, which show not only the plant details but also the work to be carried out, are given to the mechanics. Comments on the work completed are written by the mechanics on the dockets and vetted by the hospital engineers before returning them to the area office. All impending faults are noticed and the equipment operates at peak efficiency. Clerical work is reduced to a minimum.

EQUIPMENT, FITTINGS, FURNITURE

FLOORS AND FLOOR COVERINGS

See also Abstract No. 850

793. BAKKER, P. G. H. **Carpets for hospitals—wool versus synthetic fibres. (Report No. 30)** Christchurch, Wool Research Organisation of New Zealand, 1975, [i], 8pp.

Some, but not all, studies of carpeting in hospitals have shown that the hygienic properties of wool are inferior to those of synthetic fibres. This paper examines the results of a number of these studies and concludes that there is no reason why carpets made from synthetic fibres should be given preference over wool carpets. It can be shown conclusively that there is no inherent health hazard hidden in a wool pile, as has been suggested. On the contrary, wool's superior appearance retention, soiling properties and ease of cleaning recommend it for this purpose. It has been found that a heavier and denser pile (as is characteristic of a Wilton carpet) is preferable to a lightweight and open pile construction for trapping bacteria. Six tables and 25 references to the literature are included.

MEDICAL EQUIPMENT

See also Abstract No. 882

794. BRISLEN, W. and SMART, G. I. **Assessment of a single-use clinical thermometer.** *Nursing Times*, London, 1976, Feb. 12, vol. 72, no. 6, pp. 235-237.

A study to compare the relative efficiency of glass/mercury thermometers and 'Temtake', a single-use chemical dot thermometer of a type developed in the U.S.A., was made during night and day duty on an adult infectious diseases ward and a geriatric/medical ward of a general hospital. The time taken, the procedures adopted, and the attitudes of patients and staff to the new system were recorded. Results showed that the margin of error was considerably reduced using Temtake, particularly since resetting and cleaning were not required. The Temtake thermometer gave a correct reading more rapidly than the glass/mercury type, although a five per cent error rate was recorded when reading the temperature. The Temtake is unbreakable in use, and for some elderly patients seems easier to hold in the mouth. Most important, the Temtake is only used once and so reduces the opportunities for cross infection. Its use in infectious disease wards and intensive care units is therefore particularly recommended.

795. BRITISH STANDARDS INSTITUTION. **Specification for bowl stands for use in hospitals. (BS.3475:1976)** London, British Standards Institution, 1976, 10pp.

This standard specifies the basic requirements relating to materials, dimensions, construction and electrical safety precautions for single and double bowl stands for use in hospitals. Plans of typical bowl stands are included.

STAFF GENERALLY

RECRUITMENT

See Abstract Nos. 801, 903

SALARIES AND SUPERANNUATION

See Abstract No. 803

STAFF MANAGEMENT

See also Abstract Nos. 802, 805, 884

796. ROLLER, P. Dienstposten-(Stellen-)Beschreibung. **[Job description.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, Feb., vol. 72, no. 2, pp. 74-89.

The four steps to be taken when a system of job descriptions is being developed are described and illustrated. They are: (i) the staff should be informed of the proposal and given full information; (ii) detailed information should be collected of existing

duties and responsibilities by means of questionnaires and interviews; (iii) this data is evaluated; and (iv) the job description as it should be is finally drawn up. Job descriptions should be checked every two or three years (or when any change is envisaged) and revised as necessary. The way in which job descriptions are introduced in an organization is extremely important. Where a scheme has failed it is often the result of it being badly put over rather than of the scheme itself being faulty. All staff should be fully consulted and informed from the start and their co-operation sought in ensuring that job descriptions are kept up to date. The paper includes a number of check lists and tables.

STAFF TRAINING

See also Abstract Nos. 806, 808-809, 888, 889, 896, 901

797. SEGALL, A. J. and others **Systematic course design for the health fields, prepared by the Center for Educational Development in Health, Harvard School of Public Health.** New York & London, Wiley, 1975, xviii, [414]pp. £7.80

This book forms the framework for a course on systematic curriculum design that has been offered at the Harvard School of Public Health for the past five years. The purpose of the book is twofold: (i) to be used as the basic text for courses on curriculum design in the health fields; and (ii) to be used as a guide to course design efforts by teachers working by themselves or as a team.

STAFF WELFARE

798. MULLINK, J. A. M. Bedrijfsgezondheidszorg in ziekeninrichtingen? **[Occupational health care in hospitals?]** *Ziekenhuis*, Utrecht, 1976, Jan. 7, vol. 6, no. 1, pp. 12-13.

Occupational health care for industry was introduced in the Netherlands by legislation in 1962. Some of its functions are discussed briefly. Costs, at present borne by industry, and organization, which depends on the size of the individual firms, are also discussed. A plea is made for similar procedures in hospitals. This would be in the interest of both hospitals and employees. Management should be prepared financially and organizationally to accept occupational health advice. Hospitals should co-operate with other hospitals, industry and local authorities. Consequential changes in insurance premiums should be examined as well as changes in hospital fees. The function of an occupational health medical officer should be separate from that of the hospital's medical director.

799. HARRINGTON, J. M. and SHANNON, H. S. **Incidence of tuberculosis, hepatitis, brucellosis, and shigellosis in British medical laboratory workers.** *British Medical Journal*, London, 1976, March 27, vol. i, pp. 759-762.

A retrospective postal survey of 21,000 medical laboratory workers in England and Wales revealed 18 new cases of tuberculosis in 1971, an incidence rate of 110 cases per 100,000 person years of exposure, five times that of the general population. There were 35 new cases of hepatitis, with an incidence rate of 170 per 100,000 person years and 37 cases of shigellosis, an overall incidence rate of 226 per 100,000 person years.

Technicians were at greatest risk, especially if they worked in morbid anatomy departments. A similar survey carried out in 1973 of 3,000 Scottish medical workers corroborates these results. Tuberculosis and possibly hepatitis remain occupational hazards for laboratory workers, and improvements in the training and surveillance of staff are needed. A reappraisal of the codes of practice for safe working in laboratories may be necessary as the evidence indicates that health and safety precautions in some laboratories could be improved.

SPECIAL CLASSES OF STAFF

MEDICAL STAFF

See also Abstract Nos. 872, 903

800. HELSBY, R. C. and WRIGHT, R. B. **Hospital medical staff: a time for re-appraisal.** *Lancet*, London, 1976, March 20, vol. i, pp. 631-632.

In view of the entry of the United Kingdom into the European Economic Community (EEC) and the recent report on the registration of the medical profession, the medical staffing structure of the hospital service should be reviewed. There is a need to define specialists and specialties in EEC terms to allow freedom of movement of doctors within the EEC. Many of the existing 'supporting' posts in hospitals should be replaced by consultants, and the number of junior posts reduced to allow a reasonable individual work load with job satisfaction. Consultants should be grouped in teams to share junior supporting staff. Specialist posts could be offered on a sessional basis to doctors who have acquired some specialist training but are without the academic qualifications of a consultant. Some appointments could be offered to doctors on limited or temporary registration with programmes arranged to give them a tenure of three to four years, thus offering training without compromising the prospects of home-trained graduates. A manpower review of the health services could result in far-ranging economies and increases in efficiency throughout the services.

801. RUSHING, W. A. **Community, physicians, and inequality: a sociological study of the maldistribution of physicians.** Lexington, Mass. & London, D.C. Heath, 1975, xx, 257pp. £7.50

This study examines the distribution of physicians in the United States in an attempt to account for differences in manpower between different counties. Following an introduction the study is in three parts: (i) an examination of the general patterns; (ii) an examination of the effects of medical specialization and of hospitals; and (iii) discussion of alternative programmes of action. It is recognized that programmes which focus exclusively on the medical institution are likely to have very limited results and that the problem cannot be solved merely through administrative action or legislation. The plan of action recommended is based on the affiliation of disadvantaged communities to advantaged areas so that the medical needs of the former can be met more adequately.

802. ÖSTERBERG, O. Reflektioner kring läkarnas arbetstider. **[Reflections on doctors' hours of work.]** *Landstingens Tidskrift*, Stockholm, 1976, Jan., vol. 63. no. 1, pp. 36-40.

Swedish official statistics for 1972 and 1974 show that the number of doctors working in hospitals is increasing faster than the number employed outside, despite the fact that the number of established posts in the hospitals is dropping while it is rising in the health service outside the hospitals. The number of established district doctors has fallen by 30 per cent whilst the number of posts available for them has risen by seven per cent (in 1972 all established posts were filled). District doctors' posts are largely filled by locums. These facts speak ill for the future of the planned extensions of out-patient services. The minimum working week has been reduced to 40 hours, but the actual period worked by 6,060 doctors has increased by three hours a week in two years. Doctors on 24-hour call are supposed to have regular rest periods, but tend to work three weeks on and one off in lieu, to the detriment of their state of wakefulness. Increasing the number of doctors in a department without increasing the number of beds lengthens, and may double, the conference time required by the ward staff. Counties need to study the statistics carefully before basing future plans on them.

803. BRUGGEN, P. and BOURNE, S. **Further examination of the distinction awards system in England and Wales.** *British Medical Journal*, London, 1976, Feb. 28, vol. i, pp. 536-537.

Following their study made in 1974 (see *Hospital Abstracts*, Vol. 15, Abstract 485) the authors comment on the trends shown by the 749 awards made for 1974, noting increased regional discrepancies in favour of awards to consultants in the South compared with those in the North and Midlands. Problems in ascertaining the actual distribution of awards between teaching and non-teaching hospital consultants are emphasized, also the novel inclusion of 553 community physicians. Slight increases in the number of awards in psychiatry, anaesthetics and general surgery and decreases in geriatrics, thoracic surgery and neurosurgery are noted. The Tavistock Clinic's psychiatrists are scoring close to the national average but the clinic's total allocation is still below the national average for consultants and half the average for teaching hospitals. The authors welcome the co-option of a community physician to the Distinction Awards Advisory Committee, but continue to advocate the abolition of the system and the secrecy under which it works.

NURSING STAFF

See also Abstract No. 912

804. ONGLEY, V. M. **Nursing officer: clinical specialist or administrator?** *Nursing Mirror*, Sutton, Surrey, 1976, Feb. 12, vol. 142, no. 6, pp. 57-61.

A nursing officer describes an analysis of his own work schedule which he made with a view to spending more time in the clinical situation and having greater contact with patients. The first survey was made over a period of four weeks, with a second four-week survey a few months later. The results are given as percentages of total working time in nine tables and discussed. As a guide, the job description for a nursing officer

as stated in the 1966 Salmon report was used. Results showed that for this particular nursing officer, major tasks were concerned with administration rather than with direct clinical practice (61.29 per cent and 38.71 per cent of the total working time respectively). Despite a conscious drive to re-arrange the emphasis of the work, the aims were not achieved. The author believes that such an evaluation of different aspects of the work is an important feature of the nursing officer's role, particularly since official job descriptions can only be a guide for officers working in very different management situations.

805. AHUJA, H. and SHEPPARD, R. **Computerized nurse scheduling.** *Industrial Engineering*, Norcross, Ga., 1975, Oct., vol. 7, no. 10, pp. 24-29.

Various methods of staff scheduling are defined. A computerized cyclical scheduling system tested in one nursing unit of a 354-bed general hospital on schedules covering three to seven weeks is described. Its four basic components are: work pattern selector, work schedule assembler and work schedule projector (all computerized) and, at present manually operated, work load prediction and staff allocation. These are described and illustrated. Work schedule preferences were based on staff interviews. Patients were placed in three categories according to the amount of nursing required. A work load index of nursing hours in terms of an eight-hour shift was calculated for each unit and a time study made of nursing activities for each shift. An overtime saving equal to four times the cost of computer operation is estimated to have resulted from the study. The computer programmes were written in Fortran IV language and can be run on any IBM370/155 computer with a TSO facility.

806. EXTON-SMITH, J. **Management of ward-based assessments.** *Nursing Times*, London, 1976, March 4, vol. 72, no. 9, pp. 349-350.

The system of ward-based assessments for student general nurses at Bedford General Hospital was established with help from the General Nursing Council's inspector of training schools. Assessments are explained to learners during their introductory course and study blocks, and they can choose the time, place and assessor, when they feel ready. Many qualified nurses, however, are reluctant to become assessors, largely because of their already heavy work load. They need to have discussion and on-going evaluation of the assessment process, but it is difficult to find time for such meetings. Comments from students indicate that the assessment may take place in an artificial situation, and may cause anxiety to patients. It is less meaningful if carried out by a member of staff from outside the ward. There should be more management and clinical teaching in the wards, less emphasis on the allocation of tasks and more on total patient care. There needs to be much careful analysis and evaluation in order that assessment should move towards the goals of nursing.

807. **Symposium on perspectives in operating room nursing.** *Nursing Clinics of North America*, Philadelphia, Pa., 1975, Dec., vol. 10, no. 4, pp. 613-686.

This symposium is designed to present a few of the concepts and practices that operating theatre nurses are implementing in their clinical specialty today. The topics covered are: applying the nursing process to patient care in the operating theatre; assessment and communication for continuity of care for the surgical patient; the impact of surgery on body image; master nurse clinician for intraoperative care;

the new graduate in the operating theatre; controlling operating theatre-related infection in cancer patients; and play therapy in the preparation of the young child for surgery.

808. MITCHELL, W. **Assessments in psychiatric nursing.** *Nursing Times*, London, 1976, March 4, vol. 72, no. 9, pp. 350-352.

A 56-week course in psychiatric nursing for registered general nurses was started at St. Luke's-Woodside Hospital in 1973. The examination system, approved by the General Nursing Council, includes two practical assessments, one of which assesses the nurse's ability to organize an activity for a group of patients. As assessment in the ward may not show a nurse's true potential and skills, it usually takes place when some patients are being taken out, which is much more demanding for the nurse. The student chooses the time of his assessment and is well briefed beforehand. The assessors, one from the student's ward and one from outside, must display a great deal of flexibility and take a full part in the activity. The student gives a report on each patient to the assessors and they ask questions, whilst allowing the student some freedom and relaxation. Assessments are most valuable both to staff and patients, and may also be of great benefit to the hospital's public relations. An example of a checklist as used in assessment is included.

809. KERSTELL, T. Introduktionsrutiner för avdelningsföreståndare. **[Orientation for departmental managers.]** *Tidskrift för Sveriges sjuksköterskor*, Stockholm, 1976, Feb., vol. 43, pp. 48-51.

Before a nurse takes up a post of sister to which she has been promoted, she must be trained in what is expected of her. The consultant at the head of the department is responsible for ensuring that sisters in his department are given the necessary introductory course, which should be provided by the senior sister in the department. The training course comprises: (i) working routines and methods; (ii) organizational planning; (iii) training; (iv) staff administration; and (v) staff social questions. It may be given simultaneously to several experienced nurses in line for promotion. Training may also be given in methods of instruction, chairmanship of conferences, and co-operation with doctors; all with an eye to future developments and the introduction of team (group) decision-making. During the course, the future sister should meet all the doctors with whom she will be working, and she should spend half a working day in the personnel manager's department for a mutual discussion of fields of work, common problems, and likely future developments. Sister tutors from the regional hospital should inform the trainee about postgraduate courses at ward and departmental level, staff training, and county central introductory course activities. Finally, the appointee sister must contact the other (administrative and medical) sections within her future department, in order to learn how records, archives, admissions, the appointments system, and internal consultative committees are organized; and also external services such as central purchasing and supply, kitchens, telephone exchange, laboratories nursing school, and wards with which she will be working most closely.

810. SLOME, C. and others. **Effectiveness of certified nurse-midwives: a prospective evaluation study.** *American Journal of Obstetrics and Gynecology*, St. Louis, 1976, Feb. 15, vol. 124, no. 2, pp. 177-182.

University of Mississippi Medical Center has operated a nurse-midwife service since 1969. A study to assess the effectiveness of care given to obstetric patients was carried

out, using two groups of maternity patients, from registration to postnatal care. A total of 438 patients were studied. The results indicate that in a hospital setting the care of low-risk maternity patients by nurse-midwives was as effective as that provided by house doctors. There was no noticeable difference between the two groups apart from an over-readiness to make appointments for visits by the nurse-midwives and a greater number of forceps deliveries among house doctors. The increasing use of nurse-midwives in the hospital frees the doctors for more high-risk cases, provides a more logical distribution of maternity care cases, and may ultimately fill the demand for family-oriented maternity care.

OTHER PROFESSIONAL AND TECHNICAL STAFF

See Abstract Nos. 888, 889

ORGANIZATION AND ADMINISTRATION

See also Abstract No. 837

811. GEDDE-DAHL, D. Synspunkter på planlegging og styring i helsesektoren. **[Views on planning and administration in the health sector.]** *Sykehuset*, Oslo, 1976, vol. 39, no. 1, pp. 3-11.

There are three categories of human factor in the control of the health services: the administration, or professional controllers; the controlled, or the professional practitioners; and the individuals for whom the system operates, the patients. They, in their turn, attempt to control the responsible politicians. The gaps between what one could do for one's patients and what one's limited technical resources allow one to do widen daily: society must vote enough money for its patients to be given the best treatment possible. If control is to be constructive, there must be an attitude of firm mutual trust between the controllers and the controlled. There are signs that this is in danger, e.g. when the Norwegian Parliament admits that its aim is to give the staff of the health service 'the impression that their voice is heard in the decision-making process'. The health service cannot be run by impersonal system theoreticians and information processors, thinking exclusively in financial and industrial terms. Rigorous planning and control which fail to have the desired effect are then blamed for the failure—providing an excuse for even more rigorous planning. In the health service the 'raw materials' and 'products' are thinking people, and must not be over-planned for. Systematic planning and control are a vital necessity, but they must come from within the system and not from 'above'.

812. PRUVOST, R. Introduction à une étude sociologique de l'hôpital. **[An introduction to a sociological study of the hospital.]** *Gestions Hospitalières*, Mantes, 1976, Feb., no. 153, pp. 103-110, 115-129.

The author, a hospital administrator, describes the conflicts of values and interests and relationships between different elements within the hospital—doctors, patients, and administrators. He then outlines the conventional organization of the hospital into departments (general medicine, surgery, cardiology, etc.) and describes new types of structure (graduated care, organization by physiological systems, maxtrix organiza-

tion). Finally he analyses current administrative and managerial structures and proposes some modifications which could improve efficiency.

813. BROWN, M. and MONEY, W. H. **Contract management: is it for your hospital?** *Trustee*, Chicago, 1976, Feb., vol. 29, no. 2, pp. 12-16.

Contract management is currently used in the United States by a variety of small institutions to reorganize their administration. Small organizations have management and staff problems and need to attract specialized staff. The advantages of contract management are: (i) good back-up resources; (ii) security and status of belonging to a large organization; (iii) improved financial management; (iv) possibility of group purchasing; and (v) new wage and salary schemes. Hospitals considering contract management should analyse their services and develop a list of priority objectives and measures, consider the types of organizations able to meet their needs, and examine tenders from prospective firms. Public pressure may ultimately force small hospitals to take up the system by making it impossible to survive without the staff available only through contract management. Hospitals under contract management can retain some local control yet are linked together in an integrated health care delivery system. Consequently, it may be profitable for hospitals with good management teams to consider providing such services to neighbouring small hospitals in difficulty.

814. LEHMAN, E. W. **Coordinating health care: explorations in inter-organizational relations.** Beverly Hills, Calif. & London, Sage, 1975, 252pp. £6.00

This study examines the relationships among units in the United States providing either in-patient care or ambulatory services. The first chapter identifies four distinct types of control: feudal, mediated, imperial and corporate. The relevance of each of these to the delivery of health care is then discussed. A final chapter suggests ways in which inter-organization collaboration can reduce the ineffectiveness, inefficiency and unresponsiveness of present systems.

815. MILBURN, J. **Shared management expertise spells survival for the small.** *Hospitals*, Chicago, 1976, Feb. 16, vol. 50, no. 4, pp. 52-54.

Carolinas Hospital and Health Services Inc. (CHHS) is a free-standing, non-profit-making organization providing shared management engineering services, group purchasing, data processing and management services for hospitals. Small hospitals unable to manage and administer resources may need the expertise of a larger organization. CHHS developed its management services in 1974 and now provides services for five hospitals. For an annual sum an administrative staff is provided to manage the hospital under the hospital's board of trustees. The hospital also shares the CHHS group purchasing plan and other services. A profile of the hospital is drawn up for CHHS to establish whether to become involved with the hospital. The advantages of the scheme are: (i) improved staff relationships; (ii) financial budgeting and management; (iii) implementation of necessary procedures and policies; and (iv) improved public relations. National trends indicate that multi-hospital management schemes are increasingly sought after, and CHHS demonstrates that these voluntary schemes are an effective answer to the merging and consolidation of health services advocated by the federal government. [This paper also appears, under a different title, in *Trustee*, Chicago, 1976, Feb., vol. 29, no. 2, pp. 18-20.]

816. MURRAY, J. F. **Improving the hospital service?** *British Medical Journal*, London, 1976, Feb. 28, vol. i, pp. 507-508.

This comparative study is based on three years' work in a modern, compact 240-bed Dutch hospital and a partly-modernized 350-bed British hospital made up of two units about a mile from each other. The ease and economy of administration of the Dutch hospital by a medical, a nursing and an economic director with 74 supporting staff (239 in the British hospital) and the better staff atmosphere created by the monthly meeting of an obligatory works council are noted, also the generally better pay received by all staff. The absence of a State enrolled nurse equivalent, all the Dutch nurses being equivalent to State registered nurses, is noted, also the larger numbers of consultants, 25 with two or three juniors compared with 28 with 16 juniors. The Dutch hospital has no open wards, patients are seen by a consultant on admission, and waiting lists are shorter. The author suggests, as possible improvements to the hospital service in Great Britain, increased local autonomy and permission for local administrators to plan long-term hospital development and to dispose of unwanted sites, so acquiring capital for further development, and the transfer of higher income-groups to private insurance.

817. CHIARULLI, D. L'organizzazione dei servizi amministrativi degli enti ospedalieri. **[The organization of the administrative services of hospital authorities.]** *Ospedali d'Italia*, Roma, 1975, Oct., vol. 12, no. 10, pp. 54-123.

This is a critical review of the legislation (Law No. 132, 1968, Decrees 128 and 130, 1969) which covers the organization of administrative services in Italian hospitals, following the reorganization of the hospital service. Nineteen diagrams illustrate the division of duties between the different grades of staff. The author criticizes the hierarchical and inflexible nature of the system.

GOVERNING BODIES, COMMITTEES

818. CUNNINGHAM, R. M. **Governing hospitals: trustees and new accountabilities.** Chicago, American Hospital Association, 1976, xii, 176pp. $7.50

The principle changes in the work of hospital boards of trustees in the United States are their new accountabilities and the impact on their deliberations of things external to the institution—technology, law, bureaucracy, paying and planning agencies, unions, employers, neighbours, communities, the press, and the public. An examination of these new accountabilities and their effect on how trustees perform is the main focus of this study. But it also presents the author's observations and impressions of trustees gained from 30 years of reporting hospital and medical affairs.

ECONOMICS OF HOSPITAL MANAGEMENT

See also Abstract No. 815

819. PAPE, W. and KRACKE, L.-B. Krankenhaus mit Service-Center. **[The hospital with a service centre.]** *Krankenhaus Umschau*, Kulmbach, 1976, March, vol. 45, no. 3, pp. 159-160, 165-166.

As a means of reducing hospital costs and of using facilities more efficiently it is

proposed here that hospitals should jointly set up a 'service centre' to run on their behalf certain services which do not necessarily have to be provided at each individual hospital. Services which could in whole or in part be provided centrally are listed as follows: laundry; catering; central stores; sterilization; disinfection; laboratory; drug supply; administration; library; bed allocation and statistics; records; cleaning; technical services; refuse disposal; and transport. The 'service centre' would be developed gradually and at first certain services would be carried out at one of the hospitals in the group although there would be a central office to control the system. As new hospitals are being designed, or older ones modernized, the transfer of certain functions to the 'service centre' would be considered. It is recommended that a 'service centre' should function only for hospitals within a radius of 25 km. The service centre would be used by both public and private hospitals as well as old people's homes and similar institutions. A prototype plan for a 'service centre' is already being worked out by the Institute for Hospital Technology, Cologne, including alternative proposals for the managing body.

820. WALTER, T. von. Vårdplanering og vårdprogram. **[Planning and programming of care.]** *Norsk Sykehustidende*, Oslo, 1975, Nov., vol. 48, no. 11, pp. 213-217.

A great deal of rationalization has taken place in health services in the last 10 years; originally in the fields of transport, catering, cleaning and office routines, and more recently in the organization, administration and planning of the health service. Two typical Swedish projects are outlined. The first involves a nurse interviewing the patient by telephone prior to admission and filling in a form which gives the patient a numerical priority and allows a course of treatment to be planned. Waiting times are reduced, and patients do not need to repeat their symptoms to each person who sees them. The second project attempts to determine the standard of nursing for which the ward should be staffed. A formula based on staff working conditions and level of performance plus degree of centralization of certain service functions is used to give the politicians a better basis for arriving at their decisions. Health service organizational studies have been justifiably criticized for not paying sufficient attention to the aims and content of nursing. Staff at all levels are now being involved in the five- and 10-year planning.

RUNNING COSTS

821. **Control of health care cost in a uncontrolled environment.** *World Hospitals*, London, 1976, Jan., vol. 12, no. 1, pp. 85-99.

In this special session at the 19th International Hospital Congress, Zagreb, 1975, attempts to control health care costs in the United States were discussed. Following an introduction there are papers on: the inflationary period in health care costs, 1969 to 1971; the effect of the Economic Stabilization Program, August 1971 to April 1974, which attempted to control inflation in all sectors; and the Health Planning and Resources Development Act of 1974, which aims to rationalize the American health care delivery system. In a final paper, a Canadian summarizes the proceedings of the special meeting.

822. Betrachtung zur Kostenentwicklung von Krankenanstalten. **[Thoughts on hospital cost development.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, March, vol. 17, no. 3, pp. 143-144, 147-148.

A study of hospital statistics for Austria over the period 1959 to 1969 shows that the average cost per patient day rose by 191 per cent while labour costs rose by 140 per cent. A breakdown of costs reveals that staff costs (50 to 66 per cent) have grown relatively more rapidly than other costs. Over the same period of 1959 to 1969 the number of staff per 100 beds has increased by 39 per cent: this development is largely due to an increase in nurses. The numbers of medical auxiliary staff increased more than the number of doctors while the number of administrative staff remained more or less constant. Wages of hospital staff increased over the period by 61 per cent as compared with the 127 per cent average for Austria as a whole. Research is needed on hospital staffing and efficiency.

BED OCCUPANCY, ECONOMIC USE OF BEDS

See also Abstract No. 773

823. SCHWEISHEIMER, W. Wie lange kann der Patient im Krankenhaus bleiben? **[How long can the patient stay in hospital?]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, March, vol. 17, no. 3, pp. 139-141.

A group of doctors in Sacramento, Calif., have drawn up a set of tables (reproduced in the paper) which give 'permissible length of stay' for various conditions, according to age. The figures given are based on a study of 16 million discharges from 972 hospitals: they vary from two days for tonsillectomy to 21 days for acute myocardial infarct. In determining the permissible length of stay the following factors are borne in mind: the patient's age; his condition; possible complications; and the severity of the illness. The final decision on the date of discharge must of course rest with the responsible doctor but in only four per cent of cases has it been found necessary to make exceptions to the standard lengths of stay.

824. FÜSGEN, I. Überlegungen zum Thema Krankenhausverweildauer und Krankenhausreform. **[Thoughts on length of hospital stay and hospital reform.]** *Krankenhaus*, Stuttgart, 1976, Feb., vol. 68, no. 2, pp. 45-48.

Average length of stay in West German hospitals has been reduced from 21.2 days in 1951 to 17.6 days in 1973 but it is still too high and compares unfavourably with the figures for other developed countries. A study of medical admissions to Nuremberg Hospital over the years 1964 to 1974 (the results of which are set out in a series of tables) shows that elderly patients occupy beds for long periods. What is needed to reduce length of stay in acute hospitals are more geriatric hospitals, long-stay hospitals and nursing homes, but current economic conditions make this impossible for the time being. As an alternative acute hospitals could be adapted, with only minor reorganizational and structural changes, to provide a graded system of departments with acute wards, rehabilitation departments, day hospitals, and 'social units'. This would lead to reduced length of stay in expensive acute beds.

825. STÖCKEL, F. Optimale Nutzung vorhandener Kapazitäten des Krankenhauses. **[Optimum use of available capacity in the hospital.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1976, March, vol. 17, no. 3, pp. 123-128, 130-134, 137-139.

The ever-increasing cost of hospital services makes it most important that acute beds should be occupied only by patients who really need them and that existing resources should be used to the full. This paper outlines a number of proposals to this end which have been introduced, or are being considered, in Western Germany. They include the following: an integrated hospital system on a regional basis with graded hospitals providing varying levels of treatment; improved home care services; 'practice clinics' where a group practice of seven to 15 general practitioners and specialists hold surgeries and where there are also 15 to 20 in-patient beds for each doctor; pre-admission diagnostic tests; 'after-care' clinics (including day and night hospitals) for patients no longer needing acute care; 'hostels' for patients who can largely look after themselves but have to be near the hospital for investigation or treatment; progressive patient care; and the use of hospital facilities by general practitioners.

DATA PROCESSING

See Abstract Nos. 805, 830, 831, 839, 840, 897, 899, 902, 916

LIBRARIES

826. FINK, W. R. and others, editors. **Dynamics of hospital library consortia, prepared by the member librarians and project staff of the Consortium for Information Resources, West Surburban Hospital Association.** Waltham, Mass., West Suburban Hospital Research and Education Association, 1975, xvi, 304pp. $10.95

The librarians of member hospitals of the West Suburban Hospital Association, a group of hospitals in the western suburbs of Boston, Mass., formed the Consortium for Information Resources to increase co-operation among themselves in order to provide improved services to the staffs of their hospitals. This volume describes the events, processes, decisions and operations in the establishment and organization of the consortium. It is in three parts: (i) foundations for hospital library co-operation; (ii) the Consortium for Information Resources—a case study in hospital library co-operation; and (iii) regional and national library resources in support of hospital library consortia.

ORGANIZATION AND METHODS, WORK STUDY

827. MOULET, A. L'analyse fonctionnelle. **[Functional analysis.]** *Gestions Hospitalières*, Mantes, 1976, Jan., no. 152, pp. 21-23, 26-27.

This is a general description of the technique of functional analysis as it applies to the hospital. It requires the establishment of an O and M department, with a semi-permanent staff of two to three people, and the use of a computer. The operations and structure of the hospital are classified into systems (departments, laboratories),

sub-systems (wards, special laboratories), and functions. Analysis of the data and statistics can provide management with an over-all picture of the establishment and serve as a basis for rational decision-making.

MEDICAL RECORDS

See also Abstract Nos. 879, 904

828. BARCLAY, R. and others. **Towards an integrated medical record.** *Health Bulletin*, Edinburgh, 1976, Jan., vol. 18, no. 1, pp. 36-43.

In West Lothian summaries of basic information about patients and their past and present medical history are exchanged between a general practice and a hospital department as part of the referral and discharge procedure. The system is based on the problem oriented medical record (POMR). The advantages of the scheme lie in the use of structured referral and discharge letters, and the exchange of 'data base' and 'problem list' documents. The system creates a link between hospital and general practitioner which can be maintained with the minimum of effort, and provides an easy method of communicating information. The link between Bangour General Hospital, West Lothian, and Howden Health Centre, Livingston, is effectively maintained, but community records are excluded. However, when these records are integrated with either the hospital or health centre it is expected that this deficiency will be eliminated. Sample documents are reproduced.

829. TRENT REGIONAL HEALTH AUTHORITY. **Code of practice.** *Medical Record*, Boston, Lincs., 1976, Feb., vol. 17, no. 1, pp. 86-87.

A code of practice for the guidance of staff employed in hospital medical records departments has been approved by the Medical Advisory Committee of the Trent Regional Health Authority. The underlying principle is that all medical information relating to an individual must be treated as confidential. The safe custody of medical records is emphasized, and provisions concerning the disclosure of information are outlined.

830. MARSHALL, B. **The computer in the medical record department. 1. Computerization of a master index.** *Medical Record*, Boston, Lincs., 1976, Feb., vol. 17, no. 1, pp. 77-81.

The Department of Health and Social Security has sponsored a major experimental computer project, known as the Co-ordinated Project, linking University College, Charing Cross and St. Thomas' Hospitals, London and Addenbrooke's Hospital, Cambridge. The objects of the project are: to discover if four different hospitals can use the same computer hardware for four different types of application; and to see if there is enough common ground where similar applications are being examined for the user hospitals to interchange systems and programs. The investigations at Addenbrooke's Hospital on hospital administration and the procedures involved for producing a master index of patients are outlined. The master index can be used to: display the details of a patient by the use of the hospital number only; update addresses; produce a weekly list of those who have died; identify all new admissions; and produce a list of general practitioners. Further developments will include the insertion of facilities for

printing out appointments, waiting lists, admissions, bed numbers and statistics. The simple procedures and methods used indicate the practical uses computers can have in the medical records department, and the need for maintaining information in a readily accessible form.

831. ELLIS-MARTIN, K. G. **Modernize your master index.** *Medical Record*, Boston, Lincs., 1976, Feb., vol. 17, no. 1, pp. 82-83.

The new Royal Free Hospital, Hampstead, incorporated the functions of four other hospitals into its records, and consequently there were over 1,250,000 record cards on file, many in poor condition. Since there was no in-house computer system capable of processing this amount of information a new, economical procedure was set up using a SISCO system. The system is based on the use of a Singer Business Machine 1501 intelligent terminal and 1551 printer in conjunction with the production of master records on microfilm. The information is processed at the Singer Data Centre, Guildford, which produces a master index in alphabetical sequence. The system copes with 1,000 new registrations each week; multiple copies of the index are prepared and located throughout the hospital in strategic departments. The system costs approximately £8,000 and is highly economical. Future applications will include out-patient appointments and laboratory data master records from other hospitals, and 'case note location' to trace missing case notes.

HOSPITAL STATISTICS

See also Abstract No. 913

832. SCHEIDEGGER, H. von. Die Betriebsstatistik im Spital: Aufgaben und Entwicklungsmöglichkeiten. **[Management statistics in the hospital: problems and possible developments.]** *Veska*, Aarau, 1976, March, vol. 40, no. 3, pp. 143-150.

In recent years there has been an increasing need for information on hospital activities: this paper is concerned with the main aspects of hospital statistics and their importance. Although statistics on staffing and productivity are especially important other aspects should not be neglected: these include statistics on patients, on performance (nursing care, treatment, catering and laundry services, and administration), on use of supplies, on equipment, and on expenditure and income. Existing statistical material in Switzerland under each of these headings is surveyed and proposals are made for the development of a complete statistical scheme.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

833. SJÖLENIUS, B. Praktiskt tillämpad säkerhetsfilosofi. **[Practical application of a philosophy of security.]** *Sjukhuset*, Stockholm, 1976, vol. 53, no. 1, pp. 7, 9-10.

A hospital is a comparatively open institution through which up to 10,000 people may pass in a day, and is thus open to theft (of property, equipment, and drugs), the planting of bombs, and attacks on staff and patients. Technological security measures involve automatic fire alarms, burglar alarms, staff-protection attack alarms, and television supervision of locked doors, ventilator shafts, lifts, boilers, corridors, the

intensive care unit and the computer centre. A security service can be divided systematically into: (i) approach security, ensuring that only authorized persons gain access to certain areas, rooms, etc.; (ii) technological safety measures against fire, disruption of services, etc.; (iii) security of information, to ensure that medical secrecy is not compromised by unauthorized access; (iv) economic security to prevent fraud and embezzlement; (v) personal administrative security, to inform and instruct staff in the above measures; and (vi) a system of checks to ensure the service works. Security may be made the responsibility of the internal administration or may be contracted out to a public or private body. Care in public relations is vital: if the staff regard the system as repressive instead of as protective, they will sabotage it actively or passively instead of co-operating.

OTHER SPECIAL ASPECTS

834. Verhuizing van vier Amsterdamse ziekenhuizen perfect voorbereide operatie. **[Transfer of four Amsterdam hospitals to the new Slotervaart Hospital: a perfectly prepared operation.]** *Instelling-Management*, Den Haag, 1976, Feb. 24, no. 2, pp. 25-29.

The new 703-bed Slotervaart Hospital replaces four hospitals. The move on the 30 December 1975, which lasted from 0500 to 1030, involved 45 ambulances moving along pre-determined routes, assisted by First Aid and Red Cross volunteers, with police clearing the way. The period after Christmas was chosen because of low bed occupancy. First steps in organization had been gathering experience from other hospitals and consultation with municipal health services, Red Cross, transport firms, etc. Patients were divided into categories: (i) ambulant (taxis); (ii) stretchers; (iii) ambulances (blood transfusion); (iv) infectious; and (v) transport in bed. Seriously ill patients had been transferred to other hospitals in advance. Mothers carried their own babies to avoid mix-ups. Ambulances were given Christian names. A table was worked out with times of departure and arrival, delays, exits, speed of lifts, exact routes, and timetables for drivers. Each patient was given a card with particulars of ambulance, room number, etc. Patients' details were fed into a computer connected to a call system directing the patient to the appropriate ward and place. By pressing a bell a patient could contact a central monitoring system where his particulars and medical data automatically showed upon a screen. Emergency theatre teams, auxiliary and catering staff were ready awaiting the patients. An hour and a half after arrival each patient was served with a meal. The paper includes 13 photographs.

FINANCE AND ACCOUNTING

FINANCE

See also Abstract No. 821, 908

835. FORSYTHE, M. **Transfer of finance between health and local authorities.** *British Medical Journal*, London, 1976, March 13, vol. i, pp. 667-668.

The author endeavours to demonstrate the need for a system which enables capital

and/or revenue to be transferred between health and local authorities if appropriate development of services for common client groups is to be ensured. Services for the mentally handicapped in the South-East Thames Region are used as an example. A 15-year programme drawn up by the resource allocation group of the former regional hospital board is outlined and criticized. Without interfering with the autonomy of local government or increasing central control, it should be possible to devise a method of transferring resources to achieve the appropriate priorities for client groups. In the present economic climate the best formula would be one based on additional finance being made available for capital expenditure by the Department of Health and Social Security or Department of Environment but revenue would have to be found from within either service. There should be a safeguard to prevent relatively well-off area health authorities transferring revenue to local authorities when it is needed by other areas in the region.

836. Kosten- und Leistungsrechnung im Krankenhaus. **[Calculating costs and performance in the hospital.]** *Krankenhaus Umschau*, Kulmbach, 1976, Feb., vol. 45, no. 2, pp. 72-95.

This is a series of four separate papers, preceded by a general introduction, on the subject of costing in German hospitals in the light of the requirements of recent West German hospital legislation. The titles of the individual papers are as follows: partial cost calculation and flexible budgeting; calculating total or partial hospital costs; cost calculation and invoicing in the hospital; and calculating cost and performance in the hospital (by a senior officer of the Federal Ministry for Youth, Family and Health).

837. RIISE, H. Et forsøk på driftsplanlegging i helsesektoren. **[An attempt at operational planning in the health service.]** *Norsk Sykehustidende*, Oslo, 1976, Jan., vol. 49, no. 1, pp. 2-8.

The three types of operational plan in the health service are: (i) the 15- to 20-year health plan; (ii) the four- to five-year long-term budget; and (iii) the annual budget. Each shorter plan is based on the targets of the longer. The County of Akershus has attempted to define the production plan more sharply by introducing running programme budgeting. For planning and budgeting routines to be systematized, a flow of up-to-date information is required, allowing politicians and administrators to steer developments in the required direction. Closer agreement between the annual budgets and the targets laid down in the long-term plans provides a better basis for fixing priorities at hospitals and county level. Programme budgeting involves heads of department more actively in the budgeting process, making them more cost conscious. This allows alternative budgeting proposals to be presented, on the basis of various estimates of level of activity. After the service had been divided into the programming areas (general sector, psychiatric sector and mentally handicapped sector) the greatest problem encountered was the definition of units of measurement for 'need' and 'production'. Each sector had to produce reviews of its future demand, capacity and planned level of activity. Each institution must thereafter produce an annual operational plan covering: (i) general aims; (ii) overall work programme; and (iii) detailed work programme department by department. This system has been introduced gradually and is expected to be fully functional by mid-1976.

838. ILETT, F. **Cost of capital in hospital financing.** *Management Accounting*, New York, 1976, Feb., pp. 46-48.

Every investment in plant or equipment involves an element of cost, which includes interest, finance charges, dividends and fees. The use of 'cost of capital' formulas to determine such costs enables better use to be made of hospital resources. The opportunities that must be foregone in order to raise funds for a new piece of equipment and the rate of return on the equipment must be analysed in order to maintain the financial stability of the hospital. Alternative methods of financing capital expenditure are examined in the light of recent experience at two hospitals. These exemplify the basic cost of capital rule: maximize the rate of return on investments and minimize the cost of capital. The cost of capital is, however, merely a quantitative tool, and should not be used as the criterion for development. The need to improve patient care must be the overriding factor.

SUPPLIES AND STORES

SUPPLIES

839. ADB bra hjälpmedel för att rätt utrusta Eskilstuna centrallasarett. **[Automatic data processing was an excellent aid to the correct equipping of Eskilstuna Central Hospital.]** *Landstingens Tidskrift*, Stockholm, 1975, Dec., vol. 62, no. 14, pp. 15-17.

The first stages of Eskilstuna Central Hospital were built between 1970 and 1974. The departments of surgery and medicine and the laboratories are to be started in 1976. Shortage of staff in the planning office made application of computer techniques necessary, and the County Council engaged the services of consultants to programme the planning of equipment. A catalogue of equipment, with prices, was prepared and coded, making it possible to programme the cost per room, ward and department and the total cost. This made possible a high degree of standardization and elimination of overlapping. The system also printed out orders for delivery within a certain time framework, e.g. weeks 8-12, etc. The county planning department worked closely with the county purchasing department, so that authorized items were purchased at wholesale prices. The use of computers has relieved the planning staff of much repetitive routine work and has raised the standard of accuracy achieved.

840. HOLSØE, E. and others. EDB-styring af apparaturbudget og apparaturindkøb. **[Use of electronic data processing in budgeting for and purchasing equipment.]** *Tidskrift for danske Sygehuse*, København, 1976, Feb., vol. 52, pp. 21-26.

Copenhagen Hospital Management Committee is due to open the first, 564-bed stage of the 1,000-bed Herlev County Hospital in May 1976. In 1971 it was decided to process the entire inventory (budgeting, purchasing, installation, checking and handing-over) by computer. Some 7,000 items were to be purchased for 16 departments at a cost of d.kr. 100 million (£8 million). The contract was given to CBC Building Administration A/S, since there was no spare capacity in the county computer, and the data was divided into 'manual flow' (controlling information from the responsible

biomedical engineers to the director of construction administration) and 'computer data flow' (assembling and directing decision making and finance). Printouts regarding budget, expenditure approved, and orders are subdivided into three levels of detail: item of equipment, department and overall review. A letter code notes when a consignment is: partially or fully received; stored or installed; and partially or fully paid for. Three years' experience of the system at a time of record inflation has proved its worth in automatic, trouble-free registration of category of equipment and of conditions and place of delivery, and issue of reminders in the event of overdue delivery. The time saved in these routines has been spent on more sophisticated activities such as choice of and negotiations with supplier, and advisory functions. Total computation costs in three years amounted to d.kr. 200,000 (£17,000), covering input and processing of 55,000 items and printing out of 50,000 pages of data and 32,000 equipment labels. Development of the system and programs cost d.kr. 80,000 (£6,800). CBC have taken over all administrative work in this connection, for which they are paid d.kr. 50,000 (£4,250) a year. Overall costs for three years amount to d.kr. 583,000 (£50,000), the salary of two clerks for three years.

PURCHASING

841. AMMER, D. S. **Legalize the back door with 'stockless' purchasing.** *Hospitals*, Chicago, 1976, Jan. 16, vol. 50, no. 2, pp. 87-90.

'Stockless' purchasing is suitable for minor supplies used by a single department, especially for maintenance supplies and stationery. The purchasing department selects the supplier and negotiates the price; the using department then orders directly from the supplier. Departmental reserves of stores which may develop will only involve small amounts of money. The central inventory system is by-passed, and the purchasing department is merely informed of each order. The agreements are tailored to meet the specific needs of the buyer and supplier. Competitive tenders are received from the suppliers by the purchasing department. Three variations of stockless purchasing agreements allow the purchaser to compare prices and terms: (i) the supplier agrees to have the stock available, but no contractural guarantee is given; (ii) delivery to using departments is guaranteed providing the use pattern falls into a specific range; and (iii) the supplier agrees to sell a specific item and deliver it to the departments as soon as it is needed. The merits of each system are evaluated. Aspects to be considered in stockless purchasing are: (i) provision for price escalation; (ii) price of unspecified items; (iii) level of protection provided; (iv) need for an accurate estimate of needs; and (v) there must be careful performance measurement.

ECONOMIC USE OF SUPPLIES, DISPOSABLES

See Abstract No. 794

STORES

842. HOUSLEY, C. **Hospital supplies á la cart.** *Dimensions in Health Service*, Toronto, 1976, Feb., vol. 53, no. 2, pp. 26-27.

St. Anthony Hospital, Columbus, Ohio, had problems of delays, duplication, lack of

forecasting, shortages and costs in its supplies distribution system; a trolley system to supply all goods was therefore thought to be essential. A feasibility study was carried out on a medical unit for 90 days, and as a result an all-inclusive supply list was compiled for the trolleys. The aims of the scheme were: (i) to supply nursing units with a complete medical supply system; (ii) to relieve the nursing units of all non-nursing tasks, e.g. recording, delivering, ordering; (iii) to develop a practical order control system; (iv) to place full responsibility for ordering, processing and distribution with the supplies department; and (v) to implement a system of accountability for patients charges. The system has shown itself to be flexible, uncomplicated and reliable. The merits of the manual system are compared with those of an automatic trolley distribution system. The manual trolley system may also be used for linen supply and distribution, drugs or special diets, and has shown itself to be an economic and effective method of distribution.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

843. DUPIN, H. and others. Problèmes d'alimentation dans les hôpitaux de moyenne importance. **[Food problems in medium-sized hospitals.]** *Gestions Hospitalières*, Mantes, 1976, Jan., no. 152, pp. 43-53.

Replies to a questionnaire completed by 291 hospitals (hospital centres, rural hospitals, and hospices) are analysed. Half of the hospitals had between 200 and 299 beds; the rest had between 300 and 600 beds. Over half of the establishments had no full-time medical staff; 52 per cent had no accountant. In 30 per cent the cooks were considered to be inadequately qualified for their posts. In 49 per cent the kitchen equipment was considered to be poor; in 44 per cent the kitchen was too small, and storage space was inadequate in many. Most of the hospitals were organized into groups for the purchase of food. In 56 per cent some of the food was grown in the grounds; pigs were reared in 29 per cent. Most hospitals used some frozen food, in particular fish and vegetables. Some choice of menu was available in 58 per cent. The equipment for and means of distributing meals were considered inadequate in 55 per cent. Only 12 per cent had a dietitian on the staff. The most important findings are presented in nine tables.

844. HENDERSON, P. **Labor staffing guidelines for long-term care facilities.** *Hospitals*, Chicago, 1976, Jan. 16, vol. 50, no. 2, pp. 79-82.

The Health Care Division of Hillhaven Inc., Tacoma, Wash., has set up guidelines for their catering staff at long-stay care institutions. Since catering staff represent 5½ per cent of total expenses and are located in 19 states a control system is essential to ensure efficiency and high standards. The system provides administrators and supervisors with realistic guidelines and advice on under-staffing. The variable factors that affect catering departments are reduced to a minimum; only two institutions have less than 50 beds, none have more than 200. A staffing level of eight to 10 minutes per meal is used for the administrator to calculate staffing levels. Very little baking is done, the maintenance department is responsible for cleaning the floor, and the nursing staff take

the food trays to the patients. Staffing levels are calculated and analysed to determine whether the work load coincides with the number of employees available. These guidelines work efficiently for Hillhaven Inc., but would probably have to be readjusted to suit the individual situation in other organizations.

DIETETICS IN THE HOSPITAL

845. FAYARD, D. Place de la diététique dans l'hôpital. **[The place of dietetics in the hospital.]** *Gestions Hospitalières*, Mantes, 1976, Feb., no. 153, pp. 135-138.

An outline is given of the role that dietetics could play in the French hospital service where no definite structures for a dietetics department exist as yet. Ideally a doctor who specializes in nutrition should be in charge and there should be one dietitian for every 25 to 30 patients. The dietitian must work in conjunction with the doctors and nursing staff in each department, and with the treasurer and catering staff.

846. Rôle et place du diététicien dans les pays de la C.E.E. **[The role and place of the dietitian in the countries of the E.E.C.]** *Techniques Hospitalières*, Paris, 1976, Feb., vol. 31, no. 365, pp. 51-57.

This report, commissioned by the dietetic associations of the member countries of the European Economic Community, briefly describes the role of the dietitian in hospitals, institutions, industry, research, and education, in public health and in the developing countries. The dietitian is essentially a food technician, a link between doctors and research workers in nutrition on the one hand, and all those who require proper nourishment, whether they be ill or well, on the other.

LAUNDRIES AND LINEN SERVICE

LAUNDRIES

See also Abstract No. 783

847. BÉKÉSY, Z. A budapesti egészségügyi mosodák higiéniai helyzete. **[Hygienic conditions in hospital laundries—Budapest.]** *Egészségügyi Gazdasági Szemle*, Budapest, 1975, Dec., vol. 13, no. 4, pp. 504-510; summaries in Russian, English and German, pp. 510-511.

A survey of the hygienic conditions of 25 health service, mainly hospital, laundries in Budapest during the period 1969 to 1974 is reported. The proportion of machines operating unsatisfactorily from the disinfection point of view was 9.1 per cent in 1972 and 16.9 per cent in 1974. This is mainly because standard washing instructions are not followed consistently; five of the 25 laundries did not follow them at all. In eight laundries the washing machines were equipped with thermometers either only partially or not at all. In 12 laundries the clean and dirty sides were not separated. This situation can be rectified first of all by the building of a new central laundry; reconstruction of the existing laundries is also urged. [This abstract has been prepared from an English summary of the paper].

HOSPITAL LINEN AND TEXTILES

848. Hoos, W. Über den Gebrauchswert von Polyester/Baumwoll-Bettwäsche. **[The intrinsic value of polyester/cotton bed linen.]** *Krankenhaus Umschau*, Kulmbach, 1976, March, vol. 45, no. 3, pp. 175-177.

Polyester/cotton materials have two clear advantages over traditional cotton bed linen. In the first place they wear much better and therefore have a longer life. Secondly, laundering costs are lower: hydro-extraction takes three minutes instead of the 10 to 12 minutes necessary for cotton; and after hydro-extraction polyester/cotton has 30 to 35 per cent residual moisture as compared with 55 to 60 per cent for cotton and thus decreases mangling time.

HOSPITAL DOMESTIC MANAGEMENT

DOMESTIC WORK

See also Abstract No. 851

849. KNOCHE, K. Ist Krankenhausreinigung und Desinfektion durch Fremdinstitute wirtschaftlich? **[Is hospital cleaning and disinfection by an outside agency economic?]** *Krankenhaus Umschau*, Kulmbach, 1976, March, vol. 45, no. 3, pp. 150, 153-154.

Although it is generally agreed in Western Germany that contract cleaning is advantageous for hospitals it has not yet been adopted in the majority of cases. The author points out a number of advantages which contract cleaning brings with it. These include: reduced cost (an example is quoted of a Düsseldorf hospital which saved about DM120,000 a year, or DM0.8 per patient day, after the introduction of contract cleaning); no staffing problems relating to cleaners; no purchasing or storage of cleaning and disinfecting materials and equipment; wards are less disturbed by cleaners; and it is easier for the hospital to carry out bacteriological checks than when hospital staff do the cleaning. The paper notes some points of importance to be borne in mind when the contract with an outside firm is being drawn up.

850. **Alleviation of hospital cleaning problems.** *Hospital Equipment & Supplies*, London, 1976, Feb., vol. 22, no. 2, p. 30.

Leavesden, Abbots Langley and Garston Hospitals have installed new labour-saving carpet cleaning equipment. Under normal circumstances keeping carpeting clean would not present many problems, however many of the mentally handicapped patients in these hospitals are incontinent, which gives rise to serious problems of hygiene within the newly carpeted areas. At each of the hospitals a superintendent in charge of cleaning is personally responsible for the use of the cleaning equipment. The Holloway equipment selected consists of the Power Brush Carpet Conditioner, the Aquarius Carpet Soil Extraction Machine and the V117 Vacuum Cleaner. The machines are regularly maintained and cleaned each day and have maximum use. Current financial restrictions have imposed limitations on staff recruitment; consequently it is only by using non-traditional methods that it is possible to maintain carpeting in an acceptable condition.

HYGIENE IN THE HOSPITAL

See also Abstract Nos. 847, 860

851. WOLFF, L. Hygiene im Krankenhaus aus der Sicht des Hygienikers unter Berücksichtigung der Praktikabilität. **[Hygiene in the hospital as viewed by hygienists and having regard to its practicability.]** *Krankenhaus Umschau*, Kulmbach, 1976, March, vol. 45, no. 3, pp. 143-149.

This is a general survey of the requirements of hospital hygiene and of the measures necessary to maintain it. Details are given of the legislation, government guidelines and German standards on which these measures are based. Hospital areas and departments are grouped according to the degree of hygiene required (from administrative offices to highly aseptic areas) and the type of cleaning and disinfection necessary for each, as well as the frequency with which procedures are to be carried out, is set out in the form of tables.

HOSPITAL INFECTIONS

See also Abstract No. 855, 860

852. GRÄF, W. and MÜLLER, W. Zur Hospitalismusproblematik im zahnärztlichen Praxisbereich. **[Cross infection problems in dental treatment areas.]** *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene*, 1.*Abt.*, *Orig.*, *B*, Stuttgart, 1976, vol. 161, nos. 5-6, pp. 427-443; summary in English p. 427.

A study of bacterial contamination in dental practice surgeries and in dental polyclinics has shown that typical hospital infection pathogens such as *Staphylococcus aureus* and *Klebsiella* occurred only in small numbers. The average level of contamination was higher in individual dental practices than in dental clinics: the increase in bacterial contamination during the daily treatment period was also greater in individual practices than in clinics. The following were especially liable to contamination: towels used by several persons; the heads of dental turbines; suction device supports; the patients' head rest; the height control bar of the dental chair; the instrument tray; the operating lamp; and protective clothing. The detailed results of the study are set out in seven tables.

853. SPELLER, D. C. E. and others. **Epidemic infection by a gentamicin-resistant *Staphylococcus aureus* in three hospitals.** *Lancet*, London, 1976, Feb. 28, vol. i, pp. 464-466.

A *Staphylococcus aureus* strain resistant to aminoglycosides including gentamicin, and tobramycin, and to pencillin, lincomycin, and other antibiotics caused an outbreak of hospital infection in a surgical ward. This spread to the intensive therapy unit and two other hospitals. Of the 21 patients infected by *Staph. aureus*, 14 had received gentamicin, tobramycin, or lincomycin, and nine had received ampicillin. The use of antibiotics to which the staphylococcus was resistant was associated with the degree of infection. The increasing isolation of resistant strains may be related to the increased administration of gentamicin, tobramycin and lincomycin. An antibiotic policy to control their use is essential to preserve their value in the treatment of infections caused by bacteria resistant to other agents.

854. MEYER, R. D. and others. **Gentamicin-resistant *Pseudomonas aeruginosa* and *Serratia marcescens* in a general hospital.** *Lancet*, London, 1976, March 13, vol. i, pp. 580-583.

Of 1,162 isolates of *Pseudomonas aeruginosa* and 394 of *Serratia marcescens* tested in the microbiology laboratory, Wadsworth Veterans Administration Hospital, Los Angeles, Calif., during one year, 19.1 and 50 per cent respectively were found to be gentamicin-resistant. The high frequency of gentamicin-resistant *Ps. aeruginosa* and *S. marcescens* was used to carry out epidemiological investigations in the hope of controlling the outbreak and finding alternative methods of treatment. Control methods, such as hand washing, closed urinary drainage and sterile techniques were of doubtful value; successful control methods elsewhere have included suspension of the use of topical or oral gentamicin. Resistant strains were as virulent as sensitive strains. A common source was not found. Improvements were noted in 13 out of 17 patients treated with amikacin. The high frequency of gentamicin-resistance is a continuing problem in this hospital, and may soon be in others.

SOURCES OF INFECTION

855. PFEIFFER, E. H. and others. Hygienisch-bakteriologische Vergleichsuntersuchungen an 50 Krankenhäusern. II. Zur Bedeutung des Personals für Ausbreitung von Krankheitserregern auf chirurgischen Stationen. **[Comparative studies of hygiene and bacteriology in 50 hospitals. II. The role of the staff in the distribution of pathogenic organisms in surgical wards.]** *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene*, 1.*Abt., Orig., B*, Stuttgart, 1976, vol. 161, no. 5-6, pp. 399-407; summary in English pp. 399-340.

In this second part of a report on comparative bacteriological studies in 50 randomly selected acute hospitals in Rhineland Palatinate the role of staff in transmitting bacteria is examined of samples taken from 159 nurses on surgical wards, 72 were positive for *Staphylococcus aureus* in at least one of four sites: the hair was the most contaminated area, followed by the uniform (in the area of the navel), the right hand, and the throat. In 53 per cent of surgical wards hand disinfection was inadequate. The storage of used and unused disposable towels was generally unsatisfactory. Hands should be first disinfected with an approved product and then washed. Communal towels should no longer be used in hospitals.

856. BAIRD, R. M., BROWN, W. R. L. and SHOOTER, R. A. ***Pseudomonas aeruginosa* in hospital pharmacies.** *British Medical Journal*, London, 1976, Feb. 28, vol. i, pp. 511-512.

In 1971 the Public Health Laboratory Service examined 1,220 hospital medicaments intended for oral or topical application; 32 per cent were contaminated, 2.7 per cent containing *Pseudomonas aeruginosa*. This paper reports the result of investigations into the environment of eight hospital pharmacies and the preparations made in five of them, between November 1971 and May 1974. *Ps. aeruginosa* was found in moist sites such as sinks, drains and taps and in cleaning equipment stored away while still wet. Of 499 preparations, 46 were found to be contaminated. Poor lighting in and the bad

state of repair of the pharmacies, together with shortages of cleaning staff, were considered to be largely responsible for the contamination.

857. DUNKELBERG, H. and others. Hygienisch-bakteriologische Vergleichsuntersuchungen an 50 Krankenhäusern. IV. Die bakterielle Kontamination von Flüssigkeiten aus Intensivpflege-, Frühgeborenen- und Neugeborenenstationen. **[Comparative studies of hygiene and bacteriology in 50 hospitals. IV. Bacterial contamination of fluids in intensive care units, premature baby units and nurseries for the newborn.]** *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene*, 1.*Abt., Orig., B*, Stuttgart, 1976, vol. 161, nos. 5-6, pp. 417-426; summary in English pp. 417-418.

This fourth part of a report on comparative bacteriological studies in 50 randomly selected acute hospitals in Rhineland Palatinate is concerned with the contamination of fluids. Of 323 samples of liquids collected from intensive care units, premature wards and neonatal wards, 22 per cent were positive for pathogenic organisms (46 per cent of contaminations were caused by *Pseudomonas aeruginosa*, 17.6 per cent by Enterobacter and 12 per cent by *Escherichia coli*). Humidification liquids from respirators, inhalers, etc., were contaminated in 30 per cent of samples, cleaning water in 47 per cent and the solutions in which thermometers were kept in 10 per cent. Nurses were found to be deficient in their knowledge of disinfection measures.

858. MANIAR, A. C. and VANBUCKENHOUT, L. R. *Mycobacterium kansasii* **from an environmental source.** *Canadian Journal of Public Health*, Ottawa, 1976, Jan./Feb., vol. 67, no. 1, pp. 59-60.

Following the isolation of 17 cultures of *Mycobacterium kansasii* from sputum and bronchial washings of patients from the Brandon area, Manitoba, including six from the Brandon Mental Hospital, investigations were undertaken to find its source. No contamination was found when equipment was washed with sterile saline. Measuring cylinders washed with tap water were, however, contaminated and resulted in growths in different clinical specimens. The Brandon Mental Hospital water supply was obtained from an on-site reservoir which was deepened in 1973 by digging out the soil. It is suggested that this change in water source may have been responsible for the contamination of the tap water.

859. MENDES, M. F. and LYNCH, D. J. **A bacteriological survey of washrooms and toilets.** *Journal of Hygiene*, London, 1976, April, vol. 76, no. 2, pp. 183-190.

A survey of the bacterial flora present in various areas of 130 male and female washrooms and lavatories, selected at random from buildings which included shops, offices, factories, railway premises, schools and hospitals is reported. Several bacteria of faecal origin were found in large numbers. The areas most likely to be the sources of cross infection are wash-basins and lavatory seats. Priorities for disinfecting are the lavatory seat, wash-basin overflow, taphandles, and the inside handle of the entrance door. The results indicate that a daily cleaning of contact surfaces and a regular extensive maintenance and disinfection programme should be used to reduce contamination in all areas. Several tables of results are included.

PREVENTION AND CONTROL

See also Abstract Nos. 794, 851, 867

860. WERNER, H.-P. and others. Hygienisch-bakteriologische Vergleichsuntersuchungen an 50 Krankenhäusern. I. Methoden und Ziele der Kontrolluntersuchungen. **[Comparative studies of hygiene and bacteriology in 50 hospitals. I. Methods and aim of microbiological monitoring.]** *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene, 1.Abt., Orig., B,* Stuttgart, 1976, vol. 161, nos. 5-6, pp. 387-398; summary in English p. 387.

The first part of a report on comparative bacteriological studies in 50 randomly selected acute hospitals in Rhineland Palatinate is concerned with methodology. The investigations were carried out particularly in high-risk areas such as operating suites, delivery rooms, intensive care units and neonatal wards. Responsible sisters filled in a detailed questionnaire with questions under three main heads: staff clothing; cleaning and disinfection measures; and care and treatment. Sterilizers were tested, persons were tested for bacteria by means of sponge-like impression cultures and throat swabs, and floors and furniture surfaces examined by the use of 'Rodac' plates. Blood agar plates were used to test air contamination and tests were also carried out on fluids in buckets, disinfection solutions, bottles from oxygenators and air humidifiers.

861. D'AMICO, G. La profilassi delle infezioni nosocomiali nelle unita' di terapia intensiva. **[The prevention of hospital infection in intensive care units.]** *Ospedale,* Torino, 1976, Feb., vol. 29, no 2, pp. 35-54; summary in English pp. 53-54.

A review of the current literature on and an analysis of the causes of hospital infection, with particular reference to intensive care units, are followed by a survey of preventive measures. These include the provision of suitable buildings, strict isolation of patients with signs of general or local infection, and protective isolation of patients with immunological deficiencies and those undergoing cytotoxic and/or immunosuppressive therapy. A plan of the new intensive care unit for newborn babies at the 'Spirito Santo' hospital, Pescara, is included. In this unit nursing staff and visitors use separate corridors, sterile and infected material are kept apart, and there are septic and aseptic zones.

HYGIENE IN THE OPERATING THEATRE

See also Abstract No. 868

862. RITTER, M. A. and others. **The operating room environment as affected by people and the surgical face mask.** *Clinical Orthopaedics and Related Research,* Philadelphia, 1975, Sept., no. 111, pp. 147-150.

A detailed description is given of a study, carried out in an operating suite of eight theatres surrounding a sealed entrance hall, of: (i) the levels of environmental contamination in empty theatres; (ii) the levels of microbial contamination of support areas such as the hall; (iii) the effect of closed, open or swinging doors on the sources of environmental contamination; (iv) the effect upon environmental contamination of people dressed in scrub clothes but not gowned and gloved; and (v) the effect of surgical face

masks upon the environmental contamination in the hall and in the theatres. The paper includes a plan of the suite. The bacterial count in an empty operating theatre jumped from 13 colony forming units per square foot/hour to 24.8 when the doors were open with people in the hall and to 447.3 when five people entered, indicating that people are the main source of environmental contamination in operating theatres. The wearing of surgical face masks was found to have no effect on the overall environmental contamination.

863. COOPERMAN, A. M. and others. **One scalpel for major surgical procedures.** *Cleveland Clinic Quarterly*, Cleveland, 1975, vol. 42, no. 2, pp. 193-196.

In a bacterial and clinical study of 50 patients undergoing surgery, only one skin knife was used per operation instead of the traditional two. For each patient a control blade was placed immediately in liquid thyoglycolate medium and the used blade after surgery. A culture was also taken from the wound. The tests took place in the same operating theatre with the same surgical team for each case using the same skin preparation and closure. The control blades proved sterile, whereas two of the 51 used blades had positive cultures; none were associated with subsequent wound infection. Ten wound cultures were positive. The study confirmed previous research showing the low incidence of wound infection when only one knife is used. The maximum annual saving (for 300 operations per week) would be $2,700.

864. NELSON, C. L., GAVIN, T. L. and SCHWARTZ, J. **Bacteriological evaluation of a clean air system.** *Journal of the Society of Environmental Engineers*, London, 1975, Dec., vol. 14.4, no. 67, pp. 13-15.

A study to determine the effectiveness of a clean air system in reducing airborne contamination was carried out testing a wall-less horizontal system consisting of a blower filter system and a vacuum aspirator system for the staff. All investigations were carried out in one operating theatre; patients having total hip replacement arthroplasty were chosen for analysis. The air system produces 200 air changes per hour, with 500 changes per hour over the working area. Five air samplers, placed in specific areas, were used. With standard ventilation, the theatre showed measurable levels of contamination when it was empty, approximately two colony forming units per cubic foot of air per minute being discovered. When the apparatus was turned on there was an approximately 10-fold decrease in colony forming units. The results of the study confirm that clean air systems are capable of reducing the bacterial contamination produced by staff. However it is clear that each surgeon must identify the problems, system, type of surgery he does and then choose whether an improved barrier system, clean air system or some other improvements are needed to reduce the amount of bacterial contamination in the environment.

865. FITZGERALD, R. H. and WASHINGTON, J. A. **Contamination of the operative wound.** *Orthopedic Clinics of North America*, Philadelphia, 1975, Oct., vol. 6, no. 4, pp. 1105-1114.

Sepsis is the chief cause of failure of the new orthopaedic procedures involving the implantation of large foreign bodies. A study of the bacteriological environment of operating theatres used by the Mayo Clinic orthopaedic surgery department revealed

several areas of possible contamination, including the back tables for storing instruments. The use of a head hood with a large mask covering the entire face except the area round the eyes, decreases the bacterial contamination from exposed areas on the head and neck of each member of the surgical team. The wound suction system must be sterile and function efficiently, since retrograde contamination can occur if the hosing becomes blocked. The wound may be cleansed with a disinfectant, but wound irrigation with neomycin was not found as effective as had been previously thought. In conjunction with these precautions the level of airborne bacterial contamination in the operating room can be effectively reduced by limiting the number of staff and the amount of movement within the operating theatre.

STERILIZATION

866. NILÉHN, B. Mikrobiologisk bedömning av apparatur avsedd för hetvattendesinfektion. **[Microbiological assessment of hot water disinfection equipment.]** *Sjukhuset*, Stockholm, 1976, vol. 53, no. 1, pp. 24-25.

The Department of Hospital Hygiene, Linköping Regional Hospital, has developed a programme for testing the microbiological efficiency of disinfection equipment. Standardized measurements are made of water penetration, heating effect, intended programme function and disinfectant ability. Living microbes of various species in thick-walled plastic tubes are placed at various points in the apparatus and the number of bacteria surviving is expressed as a fraction of the original concentration. The performance established in this way is related to the energy input and the price demanded, and a certain minimum desirable inactivation factor is laid down. The environment in which the apparatus works also affects its efficiency, as do the purity of the air and water supplied. As a result of this work Swedish standard specifications for disinfectors have been prepared. Before any disinfection apparatus is purchased it is necessary to ask whether: (i) the necessary services are available; (ii) the mains operate at the correct pressure; (iii) the drainage system constitutes an environmental risk factor; (iv) the capacity and the programmes on the apparatus under consideration are suited to the department in which it is to be used; and (v) the apparatus actually disinfects, cleans, etc. in the way required.

867. WITTIG, J. R. and others. Hygienisch-bakteriologische Vergleichsuntersuchungen an 50 Krankenhäusern. III. Die Effektivität der Sterilisation. **[Comparative studies of hygiene and bacteriology in 50 hospitals. III. The efficacy of sterilization.]** *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene*, 1.*Abt., Orig., B*, Stuttgart, 1976, vol. 161, nos. 5-6, pp. 408-416; summary in English p. 408.

This third part of a report on comparative bacteriological studies in 50 randomly selected acute hospitals in Rhineland Palatinate is concerned with sterilization. The working of 176 autoclaves, 153 hot-air sterilizers and nine ethylene oxide units was investigated during daily routine operation. Biological and physical examinations were carried out and faults and deficiencies were recorded in detail. In only 22 per cent of the hospitals was the functioning and operation correct: in 23 per cent of the programmes faults prevented sterility. Serious errors were found to occur both in large central units and in small autoclaves in peripheral areas. A review of the literature shows that the

results obtained differ little from those of other studies. What is needed is systematic inspection, thorough expert training of staff, and closer co-operation between hospital and hygienist.

868. LABORDE. Le bloc opératoire et la stérilisation. **[The operating suite and sterilization.]** *Gestions Hospitalières*, Mantes, 1976, Jan., no. 152, pp. 55-59.

The sterilization department should be central to the whole hospital; if the operating block has its own sterilizing room, the risk of infection is increased. Dirty equipment, instruments, and linen can be brought to the sterilization department in sealed plastic bags and returned, double-wrapped, to the theatre after sterilization. The basic equipment for the sterilization of instruments, gloves, dressings, and linen is briefly described. The staff in the sterilization department should include a technician, a pharmacist/bacteriologist, and an operating theatre nurse. The nurse can supervise the packing of instruments into special boxes which are opened only when required in the theatre. Dressings are packed in individual sealed sachets.

AIR HYGIENE

See Abstract Nos. 862, 885

DISPOSAL OF WASTE

869. TRESCHER, J. Hygiène et déchets. **[Hygiene and waste.]** *Gestions Hospitalières*, Mantes, 1976, Feb., no. 153, pp. 155-159.

A system of waste disposal based on a series of plastic bags and wheeled containers of various colours is described. Material is sorted immediately after use into: infected material to be destroyed in the hospital's own incinerator; boxes, paper, and old X-ray films to be sold; non-infected waste to be sent to the incinerator; and linen destined for the laundry. The containers are towed by a tractor to their destination. Items which can be re-used are washed in each block and then taken in sealed plastic bags to the central sterilizing department. Five photographs of the equipment are included.

SAFETY MEASURES

See Abstract No. 833

ACCIDENTS, GENERALLY

870. MCQUADE, J. **The use and abuse of a safety committee.** *Dimensions in Health Service*, Toronto, 1976, Feb., vol. 53, no. 2, pp. 14-15, 17.

A greater sense of participation in accident prevention schemes and improvements in communications between supervisors and employees can be developed by a safety committee. The knowledge that the welfare of the individual is being considered by the

administration can result in better working relations. The aim of the safety committee is to improve participation, increase safety awareness, improve communication and develop the employees' sense of responsibility. However on the negative side, the committee may develop purely into a negotiating body, be highly unproductive and be used as a sounding board by the unions. There should be frequent safety inspections by the committee who should be concerned with unsafe methods, poor conditions of tools, insufficient lighting, crowded conditions and unreasonable temperatures. The safety committee should also review accidents and indicate how similar accidents may be prevented in the future.

ACCIDENTS IN GAS AND DRUG ADMINISTRATION

See Abstract No. 886

PLANNING FOR MASS EMERGENCIES

871. WILSON, E. G. **Sudden disaster: could your hospital cope?** *New Zealand Hospital*, Wellington, 1975, Nov., vol. 27, no. 8, pp. 6-8, 12-15, 17-18, 20, 25.

The importance of liaison between hospitals and the local civil defence organization is emphasized, since it is impossible for a comprehensive plan to be formulated by a single hospital to cover all known 'disasters'. The aims of and methods used by civil defence are outlined, together with the services they provide. The sequence of events encountered in a 'disaster' together with the problems and principles of planning within individual hospital departments to meet such events is outlined. A close link between civil defence and the hospital is vital to allow rapid admission of patients to the wards after assessment. The importance of frequent full-scale combined exercises with civil defence to test the plans and to let all staff know what they are supposed to be doing is emphasized.

872. STRICKLER, A. **The case for disaster site medical teams.** *Dimensions in Health Service*, Toronto, 1976, Feb., vol. 53, no. 2, pp. 30-32.

The need for medical teams to be on the site of a disaster, or available for any emergency, is emphasized. The Canadian police frequently experience difficulty in obtaining doctors and in spite of hospitals setting up contingency plans for disasters at hospital level no plans have been established for medical teams at the site of disasters. Medical expertise is necessary: (i) to provide medical authority at the site; (ii) to distinguish the living from the dead; and (iii) to manage the victims. Arguments against having medical staff on site are that: they are asked to perform outside their own environment; and the team approach implies a group of multi-skilled specialists, whereas the doctors should have a general medical or surgical training. Examples of three hospitals providing site teams are quoted. Guidelines are needed to create more such teams. As a result of the need to limit the equipment used on the site the quality of care will be raised to the level of sophisticated first aid. The skilled and experienced doctor will be more of an asset at the site than a series of unnecessary pieces of equipment.

THE PATIENT

WELFARE OF THE PATIENT

See also Abstract Nos. 878, 890, 905

873. BERGLUND, K. Vägar mot mänskligare sjukvård. **[Towards more human health care.]** *Landstingens Tidskrift*, Stockholm, 1976, Feb., no. 2, pp. 38-42.

Patients experience a sense of dehumanization as they are put through the standardized procedures of the health service. This is due to the high state of evolution of medical technology, which has resulted in hospital staff regarding patients as defective machines to be put back in full running order, and tending to ignore the social and psychological aspects, particularly in the care of chronic, disabling disease. The author pleads for a new ideology in the training and activities of doctors, nurses and physiotherapists: to learn to treat the sick as their personal friends. The aim of health care will thus no longer be mere restoration of physical fitness but also lessening or avoidance of the mental and physical after-effects of sickness. These psycho-social considerations are in no way unscientific, and should not conflict with the doctor's scientific training and philosophy. The paper is illustrated with a chart showing the current target-oriented hierarchy in medicine, and a diagram representing the interplay of influences to which the patient is exposed.

874. HOWARD, J. and STRAUSS, A., editors. **Humanizing health care.** New York & London, Wiley, 1975, xvi, 326pp. £9.20

This volume contains revised versions of papers first given at a national symposium in December 1972, together with some additional papers pertaining to research issues which were specially written for this work. The first four parts consist of papers on causes, concepts, and consequences of dehumanization and the changes needed, with two commentaries on each. A general overview of the problem is then followed by papers on the research issues from the perspectives of a physician, an anthropologist, two sociologists and an architect.

875. HUIZENGA, B. Agogie en de hulpverlening in het ziekenhuis. **[Study of the humanities and hospital care.]** *Ziekenhuis*, Utrecht, 1976, Jan. 7, no. 1, vol. 6, pp. 28-30.

The term 'Agogy' connotes a total humanitarian approach combinating, guiding, associating, forming and aiding. The term is explained at length. A patient in hospital should be approached as an entire human being, account being taken of his spiritual and social as well as his physiological and psychological needs. A hospital should be oriented primarily towards the patient and his rights. This can be expressed in the siting of the building, its accessibility, reception, information system, visiting hours, layout of wards, daily routine, etc. The personal and total humanitarian approach will rest mainly with the nursing staff, who should act in co-operation with other professional groups and disciplines in the hospital. Little progress has yet been made in this field, but the growing awareness of such needs is a step forward. More research is recommended.

876. HOOGENDOORN, L. J. A. Hoe denken oud-patiënten over hun ziekenhuis? **[What do ex-patients think of their hospital?]** *Ziekenhuis*, Utrecht, 1976, Feb. 18, vol. 6, no. 4, pp. 84-87.

The Hospital 'De Weezenlanden', Zwolle, commissioned an independent survey to find out their ex-patients' opinions. Two groups were questioned: parents of children up to 17 years old, and patients over 17. The response rate was 92 and 83 per cent respectively. It was found that the patient's doctor usually chose the specialist and the patient the hospital. Waiting time was less than a month for 33 per cent of patients, with immediate admission for 44 per cent; 79 per cent approved of their waiting times. General treatment and nursing, medical and domestic staff received high approval ratings of over 90 per cent. The presence of students when medically examined was not objected to by 90 per cent. Quality of meals, variation, service and coffee were considered good with never more than 15 per cent (for coffee) disapproving. Early start of daily routine was criticized by 26 per cent. Layout of hospital and wards was satisfactory with exception of day-rooms. Over 90 per cent approved of visiting hours, though 20 per cent would like the times extended. Pastoral care was thought important by 60 per cent. Length of stay was considered just right by 81 per cent. Polyclinics were criticized for long waiting times by 24 per cent. Some four to 20 per cent would like more information about their condition and treatment. The overall outcome was: extremely satisfied, 19 per cent; very satisfied, 36 per cent; satisfied, 37 per cent; no opinion, four per cent; not satisfied, three per cent.

HOSPITAL SOCIAL WORK

877. MEHS, M. Sozialdienst im Krankenhaus: ein Spezialgebiet der Sozialarbeit im Gesundheitswesen. **[Social service in the hospital: a special field of social work in health care.]** *Fortschritte der Medizin*, München, 1976, Feb. 19, vol. 94, no. 6, pp. 281-282, 308.

Although in Western Germany social workers do not form one of the traditional professional groups in the hospital they have been active there for more than 50 years. Recent developments in medicine and in social security and welfare services have changed and extended the field of the hospital social workers. The author, a hospital social worker who is chairman of the German Association for Social Service in the Hospital, briefly describes the responsibilities of the social workers relating to patients and their families as well as their co-operation with doctors and nurses, social security and welfare organizations for the benefit of patients.

THE GENERAL PRACTITIONER AND HIS PATIENTS

See Abstract No. 828

HOSPITAL CARE

See also Abstract Nos. 875, 909, 910, 917

878. CHAPMAN, J. E. and CHAPMAN, H. H. **Behaviour and health care: a humanistic helping process.** St. Louis, Mosby, 1975, xii, 193pp. £3.05

This volume has been prepared to help all health professions to understand their own

behaviour and that of others so that they may cope with the problems which arise. The approach to both understanding and carrying out a helping process with patients is presented as an advocacy model of humanistic helping. The work is in five parts: (i) contributions of behavioural science to health care; (ii) defining humanistic health care; (iii) developing the concepts in a framework for analysis; (iv) application of the advocacy model to health care; and (v) educational approaches to humanistic health care.

879. HOPKINS, C. E., HETHERINGTON, R. W. and PARSONS, E. M. **Quality of medical care: a factor analysis approach using medical records.** *Health Services Research*, Chicago, 1975, vol. 10, no. 2, pp. 199-208.

A system for measuring the dimensions of the content of medical care which could be used to compare the products of different doctors, hospitals or health insurance plans is outlined. A random sample of the subscribers to six Los Angeles insurance schemes produced 1,215 complete medical records. These were first rated for quality of care, and the methods and distributions of quality were then assessed under the six plans. There was no one plan that was highest on all counts, but there was a general consistency in the results. The factors analysed were: prevention; rationality; verification; and continuity. The merits of the system are: (i) relative lack of expense to repeat the survey; (ii) mechanical, reliable, not requiring expert judgement; and (iii) unobtrusive. However, it is limited by the completeness and legibility of medical records.

880. RUTSEIN, D. D. and others. **Measuring the quality of medical care: a clinical method.** *New England Journal of Medicine*, Boston, Mass., 1976, March 11, vol. 294, no. 11, pp. 582-588.

A new method of measuring the quality of medical care is outlined; it establishes quantitative negative indexes of health, indicating cases of unnecessary disease, disability and untimely death. Conditions are listed in which the occurrence of a single disease or incident would justify asking why it happened, followed by conditions in which critical increases in rates of disease, disability, or untimely death could serve as indexes of the quality of care. A third category lists those conditions requiring better definition and further study. Since the list is designed for international use, conditions and diseases are included whether they exist in the United States or not. The list of conditions provides easy comparison with existing health tabulations and takes advantage of current computer programs in international organizations. The indexes may be used to determine the level of health of the general population and the effects of economic, political and other environmental factors upon it, and also to evaluate the quality of medical care provided both within and without the hospital in order to maintain health and prevent and treat disease.

881. SMITH, R. L. **Internal properties of the CASH nursing care evaluation instrument.** *Health Services Research*, Chicago, 1975, vol. 10, no. 2, pp. 136-145.

The quality control plan developed by the Commission for Administrative Services in Hospitals (CASH) has been used frequently to measure the quality of nursing care. An analysis of one version of the plan was carried out to evaluate its accuracy for this purpose. A random bed sample at 55 medical or surgical units in eight hospitals in Boston, Detroit and Chicago was surveyed, and the 106 questions in the CASH plan

completed. The results were analysed, and three-quarters of the questions failed to meet the minimum standard psychometric test criteria. The total score calculated reflects the cleanliness of the room or unit, but many of the questions were ambiguous, and not relevant to many of the patients. The more important questions dealt with housekeeping issues rather than nursing duties. The CASH instrument would appear to be reliable as a measure of cleanliness and orderliness, but not of actual nursing care.

882. PICKETT, R. M. and TRIGGS, T. J. **Human factors in health care.** Lexington, Mass. & London, D.C. Heath, 1975, xxvi, 383pp. £9.25

This volume consists mainly of papers presented at an international symposium in Lisbon in June 1974. The theme of the symposium was the 'improvement of medical systems, in which human operators play significant roles, by way of evaluating or enhancing the performance of these human operators'. The papers cover five areas: (i) general systems; (ii) examination and health screening methods; (iii) diagnosis and decision making; (iv) treatment—staff organization and facility design; and (v) treatment—psychomotor performance and equipment design.

DISCHARGE OF PATIENTS

883. LEWIS, P. and ROBERTS, V. **Discharges planned and unplanned.** *Health and Social Service Journal*, London, 1976, March 13, vol. 86, no. 4481, pp. 490-491.

Discharging patients from hospitals requires a balance to be struck between the individual's needs and those of the hospital. The effects of the wrong decision can result in rapid readmission, trauma and waste of time, money and staff resources. In all cases it is essential that there be an accurate assessment of the situation, the prospects for the discharged patient and the availability of community resources. For many patients the move from the security of the hospital with its well-regulated system together with the need for rehabilitation may be too great a trauma. It is essential that the patient should actively involve himself in planning for his discharge. The need for communication is emphasized, for successful planning can only be achieved if the patient feels he has taken an adequate part in shaping plans for his recovery. There is a need to build up a support system of qualified hospital members to fully assess each discharge problem in the best possible light in order that discharged patients needing rehabilitation may lead full lives in the community.

SPECIAL DEPARTMENTS

OPERATING SUITES

See also Abstract Nos. 784, 807, 862, 864

884. MCCARVILLE, M. **The 10-hour OR day.** *Dimensions in Health Service*, Toronto, 1976, Feb., vol. 53, no. 2, pp. 34, 37.

York Finch General Hospital, Toronto, has set up a 10-hour day for operating theatre staff. The advantages of the system are: (i) more days off; (ii) every week-end off; (iii) no long work stretches; (iv) less commuting; (v) equal distribution of staff

over the five-day week; (vi) predictable time-table to allow staff to plan non-work activities in advance; and (vii) more time for in-service training. The development of a time-table for four days on and three days off was relatively simple. The drawbacks of the scheme were: fatigue after a long day; inability to take full advantage of the extra day off; and in-service evening lectures were not beneficial as staff were too tired to concentrate. An assessment of the staffing of the operating theatre revealed too many staff on duty from 1530 to 1730 when the work load decreased; staff work better with a constant work load. A combination of 10- and eight-hour shifts was established; any member of staff could work a 10- or eight-hour day at any time. As a result there is very little overtime except for emergencies and the work is completed each day. Staff appreciate the choice between working a 10-hour and eight-hour day, and morale has improved.

885. LACK, J. A. **Theatre pollution control.** *Anaesthesia*, Oxford, 1976, March, vol. 31, no. 2, pp. 259-262.

The problem of theatre pollution by waste anaesthetic gases has to be overcome. A system currently in use at Salisbury General Hospital for overcoming the problem is outlined. The apparatus is enhanced by the use of concentric tubing which allows effluent gases to be collected at the machine end and pumped through an exhaust system to the outside. The designs for linking the patient to the anaesthetic machine, and the exhaust system to the outside are described. The additional expiratory resistence produced by the system is minimal, and by using a simple passive system a cheap, effective system for air pollution control has been produced.

ANAESTHESIA

886. ASSOCIATION OF ANAESTHETISTS OF GREAT BRITAIN AND IRELAND. **Oxygen supply pressure failure warning and protection devices: memorandum from the Standing Sub-committee on Safety in Anaesthesia.** *Anaesthesia*, Oxford, 1976, March, vol. 31, no. 2, pp. 316-318.

There are three essential requirements for maintaining normal blood-gas tensions during anaesthesia: (i) the inspired oxygen concentration must be maintained at a value close to 21 per cent or some higher present value; (ii) there must be no carbon dioxide in the inspired gas; and (iii) the minute volume must remain within prescribed limits. To satisfy these requirements it would be necessary to monitor continuously the inspired gases and provide adjustable high-low alarm systems. It seems unlikely that a sufficiently precise and reliable system could be produced at a reasonable price within the immediate future. A considerable increase in patient safety can, however, be obtained by using an oxygen failure working device and an oxygen failure protection device. Specifications for these are given.

PHARMACY

See also Abstract No. 856

887. ASHBY, D. M. and HOFFMANN, R. P. **Current status of pharmacy services in large hospitals.** *Hospital Pharmacy*, Philadelphia, 1976, Jan., vol. 11, no. 1, pp. 4, 8-10, 12.

A merger is planned between Grace Hospital, Detroit, and another large hospital

within the Detroit Medical Center complex to produce a hospital of over 1,000 beds. In order to plan the pharmacy services for such a large complex it was thought important to ascertain what other large hospitals in the United States were doing with regard to their pharmacy services. A questionnaire was sent to all non-psychiatric hospitals having over 650 beds, for short-term patients, sited in one building. The information required covered teaching activities, beds, staffing, space allocation, and services offered. The results which are presented in tabular form, reveal that a large number of hospitals offer a wide range of pharmaceutical services to meet the needs of patients. Staffing requirements have become more demanding and the space required to provide these extra services has increased over the last few years. Future surveys will have to be taken to determine whether this trend is to continue.

888. BOOTMAN, J. L. and TANGREA, J. A. **Implementation of a fundamental training program for hospital pharmacy technicians.** *Hospital Pharmacy*, Philadelphia, 1976, Feb., vol. 11, no. 2, pp. 38, 45-49.

The pharmacy of the Clinical Center, National Institute of Health, Bethesda, Md., has established an in-service training scheme for pharmacy technicians. Previously technicians were trained informally on the job by staff pharmacists and their supervisors, but there was no uniformity in training and their instruction was superficial. The scheme plans to give on-the-job training together with classroom instruction; thus classroom concepts can be applied in practical situations. The training lasts six months and consists of four phases: orientation and functions of the pharmacy; basic pharmaceutical technology; presentation of information concerning various areas of the pharmacy; and direct communication between pharmacist and trainee. The length of time spent on each phase varies from two weeks to three months. A group of experienced technicians were the first to complete the course, and were assessed both before and after; a noticeable improvement in their abilities was found. The scheme has proved to be economically feasible and valuable for training pharmacy technicians.

889. MCCLEOD, D. C. **Structuring clinical pharmacy residencies to provide future patient drug therapy needs.** *Drug Intelligence & Clinical Pharmacy*, Hamilton, Ill., 1975, Nov., vol. 9, no. 11, pp. 606-616.

There are several types of pharmacy residency now being offered in the United States. Some are administrative, some oriented towards drug distribution activities, and others are clinical pharmacy residencies. The differences in the types of training in pharmacy residencies are the result of the philosophies of individual pharmacy departments. Buffalo (N.Y.) General Hospital has as its primary objective the need to provide rational and safe drug therapy; to meet this aim the pharmacist must have maximum knowledge and control in managing drugs. Each professional member of staff is responsible for a section of the department and all play an important role within the department. All staff members participate in teaching schemes and in-service drug education. The main objectives of the residency are to ensure that the resident has a firm basis of advanced therapeutics and can apply this knowledge. The training scheme for each resident is outlined; four months are spent in general medicine, two in intensive care, one in medical ambulatory services, two in drug information services, two in research and specialty study and one in administration. The clinically-based residency is seen as the forerunner for future pharmacy residencies.

890. SATHER, M. R. and others. **Educating patients on a spinal cord injury unit for self-medication.** *Hospital Pharmacy*, Philadelphia, 1976, Jan., vol. 11, no. 1, pp. 14, 15-17, 20-21.

Many studies have revealed that non-compliance with the prescribed drug regimen is a common occurence. The Spinal Cord Injury Department, Veterans Administration Hospital, Tampa, Fla., has developed a self-medication scheme, which is intended to educate selected patients before discharge by encouraging independence and responsibility in the management of their drugs. The patient is evaluated by a medical team and given an information sheet on the drugs and a record sheet for the number of self-administered doses he has taken. Progress is supervised for the first few days, but the patient is increasingly allowed to become independent. Previously, the patient was taught his drug regimen only just before discharge but this method allows for a greater period of time in which the patient's ability to manage his regimen outside the hospital can be assessed. The method promotes independence and enables the patient to plan his own health care.

891. ZILZ, D. **Total medical staff participation in formulary revision.** *Drug Intelligence & Clinical Pharmacy*, Hamilton, Ill., 1975, Nov., vol. 9, no. 11, pp. 596-600.

The Pharmacy and Central Services, University of Wisconsin Hospitals, decided to revise the drug formulary to obtain the most up to date attitudes and techniques on the use of specific drugs for care. Although there were only 1,800 items in the formulary, many of the drugs were believed to be unnecessary. The organization, methods, and forms and systems used to monitor information from all members of the medical and pharmacy staff in the department are described. The pharmacy and therapeutics committee encouraged a rational approach to the evaluation of drugs; 20 independent committees were convened to evaluate separate classes of drugs, and the pharmacy and therapeutics committee acted as arbitrator. All members of the medical staff were asked for their comments. As a result of this action over 400 drugs were deleted from the formulary, whilst at the same time new drugs were introduced. A system for up-dating the information has been produced so that each year items no longer in use can be deleted from the formulary, and new drugs can be added.

892. COLLINS, G. E. and LAZARUS, H. L. **Drug information services handbook.** Acton, Mass., Publishing Sciences Group; Lancaster, Medical & Technical Publishing, 1975, vii, 180 pp. £7.00

Drug information and drug information centres represent one of the expanding roles for pharmacy and its practitioners. The purposes of this handbook are: (i) to examine the scientific drug literature and determine the needs of the various health professions for dissemination of this information; (ii) to provide guidance on the establishment and operation of a drug information centre; (iii) to examine the drug information problem from the physician's point of view, and to provide guidance to assist him in obtaining the best information for his needs; and (iv) give basic guidelines for the evaluation and use of specific drug information services. The appendices include lists of poison control centres and drug information centres in the United States, examples of a drug evaluation review and therapeutic review, a policy for the storage and distribution of investigational drugs, and a policy and procedure manual for a drug information service.

893. MAGEE, P. E. and GARRISON, T. J. **Reporting adverse drug reactions in a small hospital.** *Hospitals*, Chicago, 1976, Jan. 16, vol. 50, no. 2, pp. 63-64, 66-67.

The pharmacy department, Lakeside Hospital, Kansas City, Mo., has established a drug information service and a unit dose distribution system. To co-ordinate unit dose activities, profiles are maintained of each patient's medication, and as an extension to this service an adverse drug reaction scheme has been established. The voluntary reporting scheme aims to: (i) make medical staff aware of adverse drug experiences and the consequences; (ii) provide a data base for drug reactions; and (iii) provide a surveillance system. The pharmacist interviews patients who have suffered adverse drug reactions and sends a copy of his report to the attending doctor and the nursing unit. In 9,000 patients studied, 64 adverse drug reactions were reported, resulting in a longer stay in hospital in three cases. Antibiotics and anti-infectives accounted for 52.3 per cent of the reactions. The low rate of adverse drug reactions (0.71 per cent) could be due to: (i) the adverse drug reporting scheme which is not comprehensive; (ii) the monitoring system may have prevented some adverse reactions; (iii) unit dose distribution has reduced errors; and (iv) the patient population does not have the same demographic background as in large teaching hospitals which have a larger incidence. The pharmacy has successfully increased awareness of drug interactions among medical and nursing staff and has learnt much about adverse drug reporting schemes. Pharmacies should be encouraged to initiate their own in-hospital adverse drug reaction reporting schemes.

894. WILSON, J. E. **An innovative approach to methadone distribution in a psychiatric hospital.** *Hospital Pharmacy*, Philadelphia, 1976, Feb., vol. 11, no. 2, pp. 60-63, 66-69.

The Nebraska Psychiatric Institute, Omaha, is an acute care centre designed for the evaluation, diagnosis and treatment of psychiatric illness. There are 100 beds, with an additional 10 for chemical dependence detoxification. Drugs are dispensed in unit dose form from a satellite pharmacy in the hospital supplied by the University Hospital, University of Nebraska Medical Center. Once the drug regimen for a patient is established, a copy of the order is sent to the pharmacy. Stocks of methadone are maintained in the pharmacy. Each dose, regardless of strength, is placed in a 30ml. unit dose bottle and topped up with distilled water. Two labels are used for each bottle, one with the patient's name, the other with the drug name, strength and date. A record book is maintained listing all doses that have been dispensed and administered. As the empty bottles are returned the drug label is removed and slotted on to the record sheet. This method is a convenient and accurate system for controlling the drug, and the pharmacist is able to report the location of any methadone used in the hospital.

895. VÉGH, I. Korszerü infúziós laboratórium. [**A modern laboratory for preparing intravenous solutions.**] *Egészségügyi Gazdasági Szemle*, Budapest, 1975, Dec., vol. 13, no. 4, pp. 460-468; summaries in Russian, English and German, p. 468.

In order to provide a better service and meet increasing demand, a special infusion solution laboratory is being established at Kaposvár County Hospital. A plan and description of the laboratory and details of its equipment are given. In-house preparation is justified on economic grounds because it costs 21 forints per litre in comparison

with the national enterprise's cost of 39 forints. Asepsis and other safety requirements can also be met. [This abstract has been prepared from an English summary of the paper.]

LABORATORIES

See also Abstract No. 799

896. NICHOLLS, P. D. **In-process teaching needs in a haematology department.** *Gazette of the Institute of Medical Laboratory Sciences*, London, 1976, March, vol. 20, no. 3, pp. 96-98.

Problems of over-mobility of staff and lack of organized in-service training led to the development of an in-service training scheme for the haematology department, Nottingham General Hospital. Courses were set up for pre- and post-Associateship of the Institute of Medical Laboratory Technology technicians, using speakers from other disciplines. Development of the lectures, involvement of staff at all levels and the well-defined training scheme have produced a framework for extending the students' knowledge. Recommendations for establishing such a course include: (i) sufficiently slow staff mobility to allow staff to learn how to perform each task adequately; (ii) qualified members of staff should only teach technical tasks; (ii) the emphasis should be on practical aspects rather than theoretical; (iv) a two-tier system of instruction should be devised; (v) all staff should have induction training courses; (vi) a suitably qualified member of staff should be responsible for organizing and co-ordinating the recommendations; and (vii) links should be maintained with all local colleges and training officers.

897. ENLANDER, D., editor. **Computers in laboratory medicine.** New York & London, Academic Press, 1975, xvi, 184pp. £6.75

This volume contains the papers given at a symposium sponsored by the University of California Extension, Berkeley, and the University of California San Francisco Medical School. There are papers on: new directions in clinical laboratory computerization; microcomputer preprocessing; microprocessors, programmable calculators and minicomputers; incorporation of laboratory systems into the hospital information system; representation of medical language data using the Systematized Nomenclature of Pathology; natural language storage and retrieval of medical diagnostic information; use of computers in biomedical screening; digital analysis of dynamic time-dependent data in nuclear medicine; theory and procedures for two and three dimensions using digital computers; and current trends in laboratory automation and computerization.

898. ORMEROD, L., BOYLE, C. M. and BELFIELD, A. **Clinicians' views of a routine biochemistry service in a teaching hospital.** *Health Bulletin*, Edinburgh, 1976, Jan., vol. 18, no. 1, pp. 15-21.

A questionnaire was used to seek clinicians' opinions of the service provided by the Biochemistry Department, Western Infirmary, Glasgow. The questionnaire revealed that the majority of doctors were satisfied with the service they received, and felt that the range of tests offered was adequate. The emergency service satisfied three-quarters of the clinicians, although some improvement in the length of time tests took was felt desirable. There was dissatisfaction with some aspects of communication, in particular

telephoning and interpretation of results. The clinicians were in favour of ordering tests by groups. Although dissatisfaction exists it is not clear what people require, and ultimately it may be necessary to provide individual units with reports suited to their needs. An evaluation of the relationship between clinicians and biochemists is given in the light of the results from the questionnaire.

BLOOD TRANSFUSION DEPARTMENT

899. VRAT, P. and KHAN, A. B. **Simulation of a blood-inventory-bank system in a hospital.** *Socio-Economic Planning Sciences*, Oxford, 1976, vol. 10, no. 1, pp. 7-15.

A major government hospital in New Delhi was chosen for a study which analysed a blood bank inventory system as an inventory-bank system where demand forecasting forms a part of the inventory model. The specific attributes of the blood inventory problem are listed and the system is described. The simulation model used is outlined and the results given in three tables. Optimal inventory policy guidelines are suggested using blood shortage and blood out-dating as the two important components of the measure of effectiveness.

REHABILITATION

900. ROST, S. Om rehabilitering. **[Rehabilitation.]** *Tidskrift för Sveriges sjuksköterskor*, Stockholm, 1976, Feb., vol. 43, pp. 14-17.

Rehabilitation clinics have been established in 11 of Sweden's 20 hospital regions, the field of medical rehabilitation having been recognized as a separate specialty since 1969. Counties have taken over the former State psychiatric hospitals, providing for integration of the entire sphere of psychiatric and somatic care. Örebro County has established a somatic and a psychiatric rehabilitation clinic, with the aim of assisting rehabilitation of long-stay (over 90 days) patients, the industrially injured, traffic cases, and the rising numbers of individuals pensioned off ill under the age of 60. The aim of the rehabilitation organization is to lay down the basis for continuity and co-ordination of treatment. The idea is thus to put handicapped citizens back into productive work, whilst the purpose of long-stay care is primarily to nurse the aged. Appointment of a single director of rehabilitation at national, county and local authority levels will improve the facilities for the handicapped by co-ordinating the available staff, methodological, accommodation and technological resources for optimum effect.

INTENSIVE CARE UNITS

See also Abstract Nos. 857, 861, 915

901. BASKETT, P. J. F. and others. **Resuscitation teaching room in a district general hospital: concept and practice.** *British Medical Journal*, London, 1976, March 6, vol. i, pp. 568-571.

Resuscitation teaching rooms were set up at Bristol Royal Infirmary and Frenchay Hospital, Bristol, to improve training facilities for cardiopulmonary resuscitation. The

rooms are equipped with training mannikins and models, together with wall diagrams and cassette recordings. The equipment is designed for use by a wide variety of staff, and can be successfully used to demonstrate techniques from basic mouth-to-mouth ventilation to recognition of arrhythmias and electrical defibrillation. Cassettes of lessons are available for each student to select the particular aspect of training he requires. The rooms are open 24 hours a day, enabling the trainee to select his own time to study. The system allows many trainees to gain experience in small groups with a minimal need for a teacher. The potential for such a room suggests that it may be used in district general hospitals, by general practitioners, nurses, the emergency services, and in large industrial concerns.

902. SZEWCZYKOWSKI, J. and others. **A computerized neurosurgical intensive care system.** *European Journal of Intensive Care Medicine*, Berlin, 1975, Dec., vol. 1, no. 4, pp. 189-192.

A method of acquiring and processing physiological data from patients after head injuries or neurosurgery was developed and used to monitor 60 patients. The system allows continuous measurement and on-line processing of all slowly changing physiological variables, e.g. arterial pressure, venous pressure, intracranial pressure, heart rate and temperature. The histograms prepared in the Department of Neurosurgery, Medical Research Centre, Polish Academy of Sciences, allow rapid and concise interpretation of results. The system produces reports every five minutes and in addition is programmed to print one hour reports in more detail covering data tables, plots and histograms. The sampling frequency can be varied to suit the needs. There is also a daily report which is used to evaluate the long-term trends. This technique is only possible if there is an on-line real-time computer system. The problem of the patient's movements altering the results is being overcome by the development of a new computer program.

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

903. CRAWFORD, A. R. **Family practice residency aids physician recruitment.** *Hospitals*, Chicago, 1976, Jan. 16, vol. 50, no. 2, pp. 85-86.

The Central Maine Family Practice Residency Program is sponsored by four community hospitals, a Veterans Administration hospital and Medical Care Development, Inc. (MCD), a non-profit-making state organization. The five hospitals provide clinical experience for physicians in the residencies and the MCD receives and administers the funds. Physician residencies attract new doctors to the area and obtain staff to run the ambulatory care departments. Patients are treated in the Family Medicine Institute, the scheme's model practice unit, sited in Augusta General Hospital. The Central Maine Family Practice Program is administered by an executive committee responsible for policy decisions, and financial support is provided through hospital funds and grants from the MCD. Each hospital board has a representative on the advisory committee. Problems of funding, space and adaptation have to be solved

when establishing a residency program. The provision of a medical education scheme has increased awareness of the need for continuing education and allocated the time spent by the physician with each patient more efficiently.

904. MARLE, van M. Gebruiksmogelijkheden van het poliklinische plaatje. **[Practical possibilities of the polyclinic record.]** *Ziekenhuis*, Utrecht, 1976, March 3, no. 5, pp. 124-125.

An increasing number of hospitals in the Netherlands are providing their out-patients with metal, plastic or foil plates carrying the patient's administrative data. Special plastic holders are frequently issued with the plates to contain a hospital's identification card, medical and diet sheets, insurance cards, etc. Hospitals, practitioners, pharmacists and dentists can add information to the plate providing they possess the reasonably priced apparatus appropriate to the type of plate or print. Set texts can be built into the printing apparatus, the printing can be done in one movement and reproduction is carried out by ink roll or carbon ribbon. Patients are urged to carry their plates with them. A special poster, 42 cm. by 59.4 cm. to hang in waiting rooms, has been designed for this purpose, also giving details of where and how to report any changes. Hospitals are beginning to co-operate in uniformity of plates and text layouts. The overall aim is maximum use of the plates to improve and speed up administrative procedures. A diagram of a printed plate is included.

905. LINN, L. S. **Factors associated with patient evaluation of health care.** *Milbank Memorial Fund Quarterly/Health and Society*, New York, 1975, vol. 53, no. 4, pp. 531-548.

A study was carried out in Southern California to determine levels of patient satisfaction, the characteristics of the patients and the reception they received in various ambulatory care settings. During one five-day week 1,739 out-patients were asked to complete a questionnaire in English or Spanish. The results revealed that patients from minority groups evaluated their doctors more positively; those over 60 and under 18 were more satisfied with the degree of care received, together with those who were satisfied living in their community. There was no difference in evaluations of care between new and old patients and the amount and type of care provided. The greatest differences in patient satisfaction were between settings; this can be attributed to the policies and procedures regarding continuity of care and the types of patients attending. The results indicate that patients are generally satisfied with their medical care, and that the level of satisfaction will probably not be increased by providing more services to the patients. However, policies should be altered in some areas so that patients can develop a continuing relationship with the same doctor.

CHILDREN

See also Abstract No. 785

906. GUITIAN, J. P. La pediatria en el hospital general. **[Pediatrics in the general hospital.]** *Estudios sobre Hospitales*, Barcelona, 1975, vol. 29, no. 74, pp. 17-70.

The primary objective of a children's hospital or department is to provide medical and/or surgical treatment for all those children (newborn to 14 years of age) who require

it. This treatment is provided in in- and out-patient departments on the one hand and in emergency departments and day hospitals bn the other. An independent children's hospital with a maximum of 200 beds has many advantages over a children's department in a general hospital. The paper includes a list of the different units and services which the ideal hospital should provide and also discusses staff, equipment, infection, regional planning, and the duties of the director of a children's hospital. Data are presented which demonstrate the shortage of children's units in Spain today.

907. ROBINSON, W. **St. Blazey Hospital unit for handicapped children.** *Nursing Mirror*, Sutton, Surrey, 1976, March 11, vol. 142, no. 11, pp. 62-64.

St. Blazey (Cornwall) Hospital provides facilities for looking after up to 30 residents; some are hyperactive, others behaviour disorders, while many are classified as severely mentally handicapped. The children are divided into three groups of 10 to preserve the family atmosphere. Fifteen of the children are allowed home for visits, allowing others to benefit from a stay in the unit during their holidays. Most of the resident children go to school during the day, allowing others to be admitted for day care. There are 24 nursing staff, including those on night duty, also visiting therapists, who treat children who are physically handicapped, and many volunteers. A psychologist attends the unit for four or five sessions a week. The unit is housed in a modern building, but as it was originally designed for 30 cot and non-ambulant patients some sections needed adaptation.

GERIATRICS AND LONG-STAY

See also Abstract Nos. 786-788, 844

908. DAVIS, K. **Equal treatment and unequal benefits: the Medicare program.** *Milbank Memorial Fund Quarterly/Health and Society*, New York, 1975, vol. 53, no. 4, pp. 449-487.

An analysis of the distribution of Medicare benefits to elderly people on the basis of income, race and geographical location is presented. Statistical information from Medicare on the distribution of benefits and the differentials between the elderly is given. The contribution made to these differentials by the availability of medical resources, cost of services and the demography of regions is emphasized. The importance within the Medicare system of cost-sharing, reimbursement policies and non-discrimination enforcement policies for the elderly is stressed. Recommendations for reducing the differentials in Medicare benefits are outlined, since the study reveals that a uniform medical care financing plan has not been sufficient to guarantee equal access to medical care for all elderly people. The four areas requiring improvement in the Medicare scheme are: (i) the cost-sharing structure; (ii) efforts to improve access of minorities to medical care; (iii) the source of finance; and (iv) the methods of payment for doctors.

909. BAUER, A. Sluten långvård—isolering eller mänsklig omsorg? **[Long-stay institutional care—isolation or humane care?]** *Landstingens Tidskrift*, Stockholm, 1975, Dec., vol. 62, no. 14, pp. 18-23.

Long-stay institutional care in Sweden is characterized by isolation, uninspiring routine and the passivization of the individual. The long-stay patient, usually elderly, suffers from involution—gradual limitation of the ability to orientate in the world.

The presence of geriatric specialists in nursing homes and long-stay clinics ensures that the medico-technological resources will be fully exploited for the benefit of the patients. What is now required is an extension of training and staffing facilities—and budgets—to ensure that the lower (ancillary) levels of the system are fully staffed with people trained to give old people's lives constructive activity and meaning. The financial resources of the health service are not unlimited, so the money and resources have to come from somewhere within the system. The author suggests they should come from a reduction in the 24-hour-a-day state of readiness in the various departments of acute hospitals. The presence of entire operational teams, with anaesthesiologist and diagnostic X-ray staff throughout every week-end in all the acute hospitals of Sweden is a luxury; savings on it would make many years of life happier for a large number of people. The paper is illustrated by eight photographs of long-stay institutions.

910. LOWE, M. A., LOWE, J. A. and LILLY, S. R. **Quality assurance in long-term care facilities: planning improved patient care through extended stay review, discharge planning, and medical care evaluation.** Ann Arbor, Mich., Commission on Professional and Hospital Activities, 1975, [125]pp. $15.00

This publication comprises: (i) a survey of utilization review and quality assurance systems; (ii) monitoring of care; (iii) examples of specific evaluations of medical care; (iv) achieving rehabilitation potential—an approach to 'outcome' audit; (v) examples of action programmes; and (vi) sample documentation and forms.

911. FARROW, S. C., RABLEN, M. R. and SILVER, C. P. **Geriatric admissions in East London 1962-72.** *Age and Ageing*, London, 1976, Feb., vol. 5, no. 1, pp. 49-55.

A survey of geriatric admissions between 1962 and 1972 into hospitals in East London was carried out. Patients, for the most part, presented combinations of physical, mental and social disability. A total of 6,286 admissions of 3,988 patients were analysed with regard to length of stay, outcome, number of repeat admissions, and discharge categories. The figures were large enough to show clearly the trends in hospital stay for old people. Although alterations in boundaries, population and resources over the 11 years make an analysis of the figures in relation to the population of the district impossible, it is believed that the district geriatric service dealt with the heaviest and most difficult geriatric admissions during that time. There were 550 admissions of people aged over 90, and the largest group of admissions were between 75 and 84 years old. The possibility of death in a hospital increases with age. There is a gradual increase in the percentage of admissions for 28 days or less with age; 70 per cent of patients were admitted once only, and less than two per cent were admitted more than five times. Eight per cent of males and 10 per cent of females remained in hospital for over a year. The survey revealed a 50 per cent survival rate of only 6.5 months for men and 12.9 for women after having been first admitted to the geriatric service.

912. DEHLIN, O. and LINDBERG, B. **Lifting burden for a nursing aide during patient care in a geriatric ward.** *Scandinavian Journal of Rehabilitation Medicine*, Stockholm, 1975, vol. 7, no. 2, pp. 65-72.

A study, using a force-plate, to determine the lifting burden when giving lifting

assistance to 16 geriatric patients with varying degrees of handicap is described. Factors considered included the weight of the burden lifted, the position of the nursing aide's body during the lift, how often the lift was repeated, how much time it required and whether one or more aides were required to carry it out. The results are presented in three tables and eight graphs. It was found that the lifting burden frequently exceeded recommended permissible maximum weight loads during the different types of lift. The lifts were often performed under unfavourable conditions and seldom with an 'ideal' lifting technique.

913. RUDD, T. N. **Statistics in geriatric planning.** *Health and Social Service Journal*, London, 1976, March 13, vol. 86, no. 4481, p. 492.

The assessment of priorities and productivity has become of major importance to the National Health Service. Statistical information now available must be used in a more sophisticated manner in order to obtain the maximum benefit. Statistical monitoring, especially in geriatric wards, is of prime importance. The most relevant indications of productivity are the annual statistics of patient turnover per bed; these vary considerably between department. In a geriatric ward the percentage of deaths related to admissions should be about 35 per cent; where there is a low annual turnover of beds and a high death rate there is clearly a static service. Statistics need careful interpretation but are essential for evaluating facilities and policies. They must be used to improve the standard of care and practice and to inform district management teams which hospital departments are failing to meet their target.

NEUROLOGY AND NEUROSURGERY

See Abstract No. 902

EAR, NOSE AND THROAT

914. WALKER, D. **An integrated speech therapy service.** *Health and Social Service Journal*, London, 1976, March 13, vol. 86, no. 4481, p. 493.

Speech therapy in England was traditionally divided into two sections: the school health and infant welfare services, administered by the local authority service; and the hospital service, administered by the hospital authority. With the reorganization of the health service opportunities for a fully integrated speech therapy service arose. However the first attempts at integrating the speech therapy services in Southampton were made in 1972. Services originally provided by the hospital were provided in clinics nearer the patients' homes. An integrated community/hospital, and adult/child service began. The City of Southampton was divided into six sectors to give maximum support to families and patients; each sector had a trained speech therapist responsible for the services in the area. Patients referred by hospital consultants as in-patients were visited by the therapist for the sector, and after discharge were treated in the nearest neighbourhood clinic by the same therapist. An advisory service to schools has been developed, liaising with educational and clinical psychologists. Evening advisory meetings for relatives of 'stroke' patients and the parents of handicapped children are frequently held to discuss various aspects of the problem. There is also a strong teaching emphasis, lectures being given to students in health visiting, psychology, nursing, and to teachers and playgroup supervisors.

CARDIOLOGY

915. NOURY, P. L'organisation des soins intensifs cardiaques. **[The organization of coronary care.]** Paris, Maloine, 1975, 366pp. 88F.

This study of coronary care is in four parts: (i) the pathology of coronary care, including the concept of the coronary care unit (CCU); (ii) the planning and design of CCUs; (iii) equipment and supplies; and (iv) staffing. Plans, photographs, diagrams and tables are included, together with a list of 86 references to the literature.

SURGERY

See Abstract No. 855

MATERNITY

See also Abstract Nos. 810, 857

916. TUCK, C. S. and others. **The use of a computer in an obstetric department.** *British Journal of Obstetrics and Gynaecology*, London, 1976, Feb., vol. 83, no. 2, pp. 97-104.

The Department of Obstetrics, The London Hospital, consists of two units one mile apart in which a total of 2,500 patients are delivered each year. A system has been developed using the hospital's Univac 418/III computer to provide regular statistical analyses of the department's work and summary sheets for 86 per cent of patients within one week of their discharge. The computer input form is described and an example reproduced; this is completed by junior medical staff. There are two types of output: a weekly run to produce the discharge summaries and update the file; and special runs, including a quarterly analysis and searches for cases with a particular incidence. Four copies of the summary are reproduced, one each for the patient's general practitioner and medical record and two for the obstetric department. Some of the problems encountered and their solutions are discussed. The time of typists and doctors is saved. Examples of the output are reproduced.

DENTISTRY

See Abstract No. 852

PSYCHIATRY

See also Abstract Nos. 789, 808, 835, 850, 894

917. HOEING, J. Kwaliteit van de zorg en grootte van de zwakzinnigeninrichting. **[Quality of care and the size of the institution for the mentally handicapped.]** *Ziekenhuis*, Utrecht, 1976, Feb. 18, vol. 6, no. 4, pp. 92-96.

The quality of care in a small theoretical institution is discussed, together with the desired number and qualifications of staff. Quality in relation to care of the patient is

determined by attitude, co-operation, tolerance, understanding and proper methods of treatment. Affecting the quality are direct conditions (number of staff, building, equipment, financing, internal structure and communication, communication with the outside world, and functioning of the institution) and indirect conditions (the organization of mental health care, co-ordination between various services and the total package of services). Detailed calculations are given of the number of nursing staff, both qualified and non-qualified, in ratio to various categories of patients. The overall conclusion is a requirement of 150 qualified plus 151 non-qualified staff for a 314-bed institution. A full-time medical consultant, physiotherapist, possible assistants, two educational and psychological staff and one or two social workers would also be required. Finally, in a elaborate plan, the author tries to quantify and assess various features of functioning within the institution, such as staff/patient ratios, hygiene, management structure, staff training, clothing, legal positions, admissions, etc.

SOCIAL MEDICINE

918. PHILLIPS, D. F. **The case for hospital-based epidemiology departments.** *Hospital Medical Staff*, Chicago, 1976, Jan., vol. 5, no. 1, pp. 11-18.

The need to develop a department of epidemiology within every hospital to collect and disseminate all the health information produced by a hospital, combining medical records and accounting services is outlined. The importance of readily accessible hospital-based information for evaluating services and patient care is shown in studies based on Vermont and Maine. The Vermont study revealed that population-based health systems are an important step in the development of a rational public health policy; and Maine study explored the significance of diagnostic mix of in-patients to the concept of need and revealed that need depends on the doctor, choice of place and type of treatment. A third study on the impact of intensive coronary care in England and Wales explored the discrepancy between national, regional and hospital statistics, and revealed a lack of detailed evidence on the subject. Many conditions need further documentation and consideration from an epidemiological viewpoint. Decisions regarding the selection of information for hospital data banks should be taken in the light of the services offered by the hospital. Epidemiologists and doctors will have to expand their concepts of care and disease in order to evaluate the need for medical care and the hospital appears to offer a suitable base for such an expansion, in view of the need to justify the use of services, evaluate patient care and co-ordinate health care planning.

919. GARON, G. Le département de santé communautaire peut-il compter sur l'hôpital? **[Can the department of community health rely on the hospital?]** *Administration Hospitalière et Sociale*, Montréal, 1976, March, vol. 22, no. 3, pp. 15-18.

In the opinion of the author, a chief hospital administrator, too much power has been given to the heads of the new departments of community health (DCH) within the hospitals. These departments should contribute to the achievement of the objectives of the hospital, and not vice versa. It is the hospital administrators and management committees who should decide, at a regional level, what powers to delegate to the

professional staff of the DCH. By giving the DCH a separate budget, the Minister for Social Affairs in Quebec has created, not a sub-system, but a parallel system.

920. MARSAN, R. G. Le département de santé communautaire: actif communautaire ou passif hospitalier? **[The department of community health: an asset to the community or a liability to the hospital?]** *Administration Hospitalière et Sociale*, Montréal, 1976, March, vol. 22, no. 3, pp. 4-8.

The reform of the health service in the Province of Quebec in 1971 provided for the establishment of departments of community health in 32 hospitals. These departments are responsible for the school health service, perinatal clinics, and public and occupational health. The author describes the enormous impact of these new departments on the hospital as a whole. The hospitals will not be able to cope with this extra burden unless they have the full co-operation of the local community service centres and of those hospitals which do not have a department of community health.

921. PINEAULT, R. Les établissements de santé dans le contexte de la santé communautaire. **[Health facilities in the context of community health.]** *Administration Hospitalière et Sociale*, Montréal, 1976, March, vol. 22, no. 3, pp. 11-13.

Since 'health' is a multifactorial and multidimensional concept, it is extremely difficult to assess the contribution of the new departments of community health (DCH) to the health of the population as a whole. Changes in people's attitudes and their environment are more likely to lead to improvements in the health of the population than are new and highly specialized forms of treatment. The hospitals must redefine their functional objectives to meet the needs of a given population, and new criteria for evaluating its performance must be established. At the moment, the DCH are planning and evaluating programmes carried out on their behalf by the local community service centres. The DCH will only achieve their objectives if they have the whole-hearted co-operation of these centres and of other elements in the social services network.

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